



AUGUST 1983 Vol II No 9

Zagom un into the Ignosphere with Imgine and then tackle their Jumping sck — a game destined to bring you down to Earth. And you can also read down to Earth. And you can also read about Cosmic Knockout, a game which

Win a remote control joystick in our Vectron and Sky Skipper.

Reviews the first laser disc game to reach our shores and tackles Mad Planets, Oyrusse and Hadrian's Wall. REVIEWS 104

We kick-off with the full colour so shots you've been requesting and then take you through eight reviews, including Paion Scrabble.

There's 100 Spectrum cassettes to be



Two competitions this month one for the programmers and one for the games players

We outline the rules for our grand £5,000 Calisto Programming Competition on page 10. First prize is £5,000 but anyone could win the chance of a Calisto Software programming contract to market the game they

If you want to play games rather than write them, then turn to Arcade Arena and find a game for your micro.

have entered

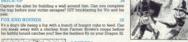
Send in your best score to us and we'll invite the top scorers along to a grand

final. Arcade Arena starts on page 81 with games for the Atari, Spectrum, Vic-20 and Sharp.

Earth is being threatened by aliens from a sinister galaxy who want to colonise our planet and enslave all the inhabitants. Only space commanders with a Spectrum can save our universel

Capture the alien by building a wall around him. Can you complete the trap before your victim escapes? DIY bricklaying for Vic and his

pals. FOX AND HOUNDS It's a dog's life being a fox with a bunch of hungry cubs to feed. Can



LANDERS

Remember the muntant landers from Defender, the big daddy of all rideo games — well they are back, twice as mean and invading the BBC model B.

The tortuous twists and turns of this maze will intrigue even the most laded Pacman player. 3D graphics, monsters, sliding doors, all for locky Atari 400800 owners.



Beware the snake in the grass. It's out to steal all the fruit from the orchard. Texas owners can take charge of this slippery customer.



Fred the Repairman has been miniaturised so he can fit inside your Sharn M780k and deal with some energy bytes — but he doesn't know about the sinister Sparx which is out to frazzle him with 10 GLADIATORS

Two weapon wielding figures step out into the sunlight. The crowd roars as battle commences. Bloodstained action for the ZX81.

ALCONOMICS A

MAILRAG

Learn how joysticks work! COMPETITION Win £5,000 cash in Calisto's summer holiday programming competition. It could turn you into a top programmer

BUG HUNTER The unthinkable has happened. A reader has infiltrated the very heart of the C&VG offices and is transmitting our innermost secrets. Robert Schiffreen is

Bug Hunter. 28 The programmer's nephew is home for the school holidays and Ram's loyalties

are put to the test again. DISASTERS

ARCADE ARENA Four special games for you rour special games for younginers with a quick eye and a speedy hand on the keyboard. Key-in Balloonacy, Super Nibblers, Haunted House and Epidemic and send us your top scores. SEVENTH EMPIRE

Keith Campbell looks at two "X" gar Garry Marshall takes a look at graphics

on the Texas TI 99/4a. Max Bramer's World Championship preview

Allan Scarff on ladders.

Editor Terry Pratt Assistant editor Expose Lacov. Editorial assistant Clare Edgelov. Reader services Robert Schifteen. Art editor Linda Freeman. Designer Lynda Sterry. r retty risti, Assantant etter Lugicie ini-ty, anaesta assantant and control of the control of t Publisher Tom Moloney Editorial and advertisement officer: Durrant House, 8 Herbal Hill, London ECIR SB: Telephone Editorial 01-278 6598. Advertising 01-228 6692

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command. The eight-data **OUICKDRAW** bits of port 127 are usually high ie. Port 127 contains TO MUSIC decimal 255 or binary

Dear Sir. Ouickdraw in the June 1983 issue of C&VG was excellent. I typed it into my Apple computer and was

immediately impressed by the graphics. But the Death March tune was awful! I have written a new Death March routine which other readers

might like to try. Change line 98 to read as follows: 98 DATA 245, 215, 200, 245, 205, 150, 245, 173, 50. 245, 205, 150, 230, 203, 100, 235, 175, 50, 235, 190, 150, 245, 185, 50, 245, 185, 150, 247, 190, 50, 245, 255, 500, Mark Heather. Sevenoaks.

OVER THE STICKS!

Dear Sir, I own a 16k ZX81 and have a motherhoard and wish to attain a 1/0 port so that I can use my Atari joysticks. So please could you tell me if there is any such 1/0 port for Atari joysticks and who makes them. Dean Clark.

Editor's reply: There are three main joystick controllers for the Sinclair machines. They are made by Kempston, Fuller and AGF. Kempston and AGF modules plug directly into the rear of the ZX computer. The Fuller system is part of its "box"

These will all be reviewed in the near future Keith Archer, of Fuller. describes what happens when a joystick is used: The Fuller box has a joystick controller port or socket

which works in a similar way to Kempston's. Our joystick is sensed by the Spectrum using the 'IN' 11111111. As the joystick is moved around or the fire button pressed, certain bits of the eight-bit, byte will be pulled low to logic 0.

Therefore the IN 127 mmand would return different decimal values according to which direction the joystick is being pushed. 7 6 5 4 3 2 1 0 BIT NO.

NORMALLY HIGH - LOGIC 1

RLDU CONTROL OF IOYSTICK

As the joystick is pushed up, bit 0 is pulled low so the binary value becomes 111111110 - decimal 254. When the fire key is pressed bit 7 goes low

giving #1111111 — decimal Any combination of direction or fire key: ie.



well as fire would give three bits low ie. \$1111010 - decimal 122

So, in a Basic program, a statement of the form: IF INKEYS = "5" THEN LET X=X+1 for action to the left could be replaced by IF IN 127 = BIN 11111011 THEN LET X = X+1 or IF IN 127 = 251 THEN LET X = X+1

Replacing the appropriate INKEYS statement with the right IN 127 command, a

game could be controlled by joysticks instead of cursor keys, or any other combination of keys.

One common guestion asked is "which keys does your joystick work on?" The answer is none.

Buying a joystick does not mean that you can control all your games without changes. I have found that people think that if they have a game which uses the cursor control kevs _ 5678 with 4 to fine or similar, and they find another game with the same keys to control the game but it also works on a joystick, then they assume that all games using these keys will be OK using a joystick and controller.

They don't realise that the game needs to be changed to suit the joystick being used.

THE LONG LOST BUG!

Dear Sir. A word about the bugs. What has happened to Lost Memory (see May 82, issue No. 7)? I suppose he's forgotten which micro he was in and has just wandered off. By the way, who is the person behind the marvellous Bugs strips?

As an ardent fan of the Bugs (when in magazines and not in ROM's or in programs) I thought of a basic story line you might want to use: The micro has a synthesiser, and when it plays music (or "Pings", "Zaps" and "Brrr's" as the case may be) it's all thanks to the Bug's band. The micro-owner, however, hove a super-addictive 'shoot-emdown' game with "Zans". "Boings", "Wagawooawagawoo's" and everything else

you can think of. So as the micro-owner plays this game for hours on end the bugs soon collapse exhausted and all that's left of the game in the way of sound is "Blip!", "Crash!", "Aaargh!", "Omph!", "Phutt!" Jeremy Youngman. Old Catton Norwich

Editors reply: Elphin Lloyd-Iones is the man behind the Bugs Jeremy, and he is always looking for new ideas for scripts otherwise he has to rely on the feeble efforts of yours truly. So we'll consider your idea and if anyone else out

there has a good idea for a Bugs' script please put it down on paper and write in. A WOULD-BE SKY PILOT

I own a 32k Pet and as yet I have not found one flight simulation for it

Please could you ask your readers if they know of any company which supplies this

P.S. What do you get if you cross a nuclear reactor with a computer? Fission Chine! Barry Jones, Knebworth.

CONVERTING COMMANDS

Dear Sir, At school we learn how to write programs and use a Pet computer, but I can only afford an ZX81 plus 16k RAM. Could you tell me if there is a piece of hardware or cassette to convert the INPUT command to READ/DATA? Dean Moore. Darwon

Lancs. Editor's reply: Most ZX81 programs use string arrays to overcome the lack of READ/DATA, RESTORE. They also use LET too

You will have to do this conversion to get any software using these constructions to run on the ZX81. (Slice the string containing the information.)

Calisto Software Ltd.

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C&VG/S



MALBAR

LONG LIVE The Pet

Dear Sir, Is my Pet dead? I was introduced to computers about a year ago, and was fortunate to obtain a small keyboard 2001/8k Pet at a resonable price, on which to start. Up to that time there was a wealth of useful programs for the Pet in the reservatives on the markets

magazines on the market. With increased experience I now need more memory and would like to upgrade the ROM's. Correspondence with Commodore for help only produced an unsatisfactory reply after several letters and months, and the Commodore acents I

upgrade as part of an expensive service, or sell me a Vic.
The Pet Users Club provided the most beneficial advice and consequently I have now installed one of Audio Computers' excellent 32k expansion RAM's but the ROM problem still remains.

contacted only wanted to

The point of the letter is to ask in the light of CBM's general unhelpfulness, if the Pet has finally reached the end of its life.

It is also interesting to note that most magazines, including yours, now have very little of any consequence to offer for the

consequence to offer for the Pet, we seem inundated with offerings for the Vic and ZX81! In conclusion, I shall like to

thank you for refreshing approach to computer programming in your articles, mainly 'Practical Programming', and 'Graphics'. I. Wyatt.

March, Cambridgeshire

Editor's reply: The Pet, in its original form is most certainly 'dead' and has been for some years. It has, however, produced a number of offspring — the Vic, Commodore 64 etc. The model you have is difficult to upgrade to Basic 2.0 or Basic 4.0 and further discussion with the Pet Users Club should point you members who have overcome the problem.

As for the lack of

software . . . the Pet was really developed as an engineering/commercial/ educational machine and so few games have recently been published as its derivatives do so much better. There is nothing to stop you converting Vic games into Pet ones.

CRACKING

THE CODE

Dear Sir, I own a ZX Spectrum and I am having a problem with saving writing and loading. I think it would be a good idea if readers who can successfully save, verify and load volumes could tell your readers the volume settings they use on their cassette recorders when carrying out

these functions. It would also help if they tell us the make of recorder they use. My own recorder is a Waltham W104MIA. Nick Morgan, Wolverhampton,

West Midlands:
Editor's reply: The Waltham
cassette recorder is a fairly
cheap model and is not
really recommended for the
Spectrum. Even similar
models give different
results — so your idea is
not really no. We suggest
that anybody buying a
cassette recorder for any

computer tries it out before paying for it! KONG'S ODD BEHAVIOUR

Dear Sir, I am writing on behalf of all the Donkey Kong players in Eastbourne, we have about four or five Donkey Kong machines in various arcades and pubs in Eastbourne, but every one appears to be

My present high score is 428,300 which I achieved several months ago and which you printed in your magazine, I achieved this score and had two lives left when the machine went faulty. Since then I have not found a single machine in or outside Eastbourne which will go above that score.

I know that some machines in the USA go up to 800,000 but they have a different type of machine.

I have also found other variations on the game in France and Spain in which extra gaps have been left in the beams so that Mario has to jump holes as well as barrels. Also in some versions (on the pie screen) Kong rolls arround on skates and, on the plug screen, if you touch Kong rolls arround you die. On others you can run behind Kong or in front.

On all of the different machines I have played on they all seem to go wrong as



I have explained. This is a great pity as I can now reach 400,000 with only one life then the machine goes wrong and I lose the other three lives. I am sure that if I played on a working machine I could attain a much higher score. Have any of your other

rave any or your other readers experienced this? J. Bull, Eastbourne, East Sussex.

PROCESSING VIDEO GAMES

Dear Sir, Could you please advise me whether there are any video game programmes that are compatible to use with Spellbinder word processor. Miss J. E. Ogilvie,

Ipswich, Suffolk.

Editor's reply: Most word processors are not able to handle games. However, yours seems to be able to use Basic. What any game needs though, are decent graphics so it would be highly unlikely that any games are available.

DEFENDING THE ATARI

Dear Sir,
I felt I must write and voice
my disagreement with a
number of points raised in
your May issue. First, I
disagree that the standard of
Atari games published is
particularly high.
Secondly, Mr D A.

Johnson, I believe from an interested friend that T.L sprites are only available if the extended Basic cartridge is bought.

Lastly, your Atari Defender reviewer cannot be an Atari owner. Put Preppie. Protector, Galactic Chase and 250 other games up against Acornsoft — the only real quality Beeb games — and Atari would win every time. Marc Freebury, Reading, Berks.

NEW IDEAS, NEW GAMES

I have an idea for what I believe to be an original video game for home or maybe arcade use. However, my knowledge of programming is insufficient to enable me to produce more than an outline. Could you please tell me:

Which manufacturers might be interested and how might they be best approached? What detail would be required? How can I best protect my interests? A. F. Hackett

Northumberland.

Editor's reply: The best way to locate a manufacturer' distributor of games is to look through, say, C&VG and find who seems to be marketing the best range for your machine. Just write a letter and say what you have. Do not send anything, Outline the game and sak for details of any legal agreements they may use. Any reputable company has

these things sewn up.
Your interests could best
be looked after by going to
a lawyer, and let him have
a look through any
agreement. Say 10% of any
sales, or some money up
front and a lower royalty.

COMPETITION COMPETITION COMPET

YOUR NEW PROGRAM COULDWIN YOU £5,000!

Put a special effort into your next program — it could be worth

There's £5,000 in good honest cash going to the winner of our August competition to find Britain's brightest programming talents.

The prize comes from Calisto Software of Birmingham which is keen to expand the number of machines it covers and use homegrown programmers rather than ship in games from the US.

snip in games from the Us. Calisto's Mike Woodroffe believes it takes three months to write a good games program and that's what you've got. If you're starting from scratch, your program must be finished by October 16th.

If you are going to polish up one of your previous efforts, then why not send it quickly and get started on another program. You can enter as many programs as you like as long as each comes with an entry form cut from the magazine — and we'll have more forms in our September and October issues. But there's a chance for everyone

to be a winner in this competition as Calisto will be giving out software contracts to the designers of games they want to market.

they want to market.

So even if you don't end up £5,000 richer straight away, you could still

find the royalties rolling in if you become part of Calisto's team of software writers.

You can enter on any popular microcomputer and all cassettes will be tested by Calisto's team of judges. If your offering is picked as the winner, you'll be presented with a cheque for 55,000 at the brand new home computing show Brainwave 38 in the NEC Birmingham in the first week of November.

To enter, simply fill in the form below and attach it to a cassette of the game. Make sure you fill in all the details about yourself and your game on the form.

If the game instructions are not included on the cassette itself, then add them on a separate piece of paper but please ensure that your name and address are included on every part of your entry.

Perhaps you are a keen programmer who has not yet turned his hand to games, then you can enter any kind of program and Calisto will test it out.

The winner will be the reader who comes up with the best commercial program, and Calisto will also pay royalties on all copies sold. Remember all published entries will be given a software contract, possibly worth a lot of money.

The judging time is limited so get your entry in as quickly as possible but be sure that your program is properly polished first, to give yourself a good chance of coming away \$5,000 richer

The entries must be sent to: £5,000 Program, Calisto Software, 119 John Bright Street, Birmingham B1 IBE.

VOTE FOR THE

Do you have a favourite game that is worth its weight in gold? Or a software company you would like to reward for its high standards and prompt service?

Here at C&VG, we decided that

the best of British software houses deserved the chance to win some recognition after a hard and competitive year which has seen games programming standards rising fast.

We are sponsoring five Golden

We are sponsoring five Golden Joystick Awards which we hope will become the UK Oscars of games programming.

This is your chance to nominate a company which has given good service or earn recognition for the game which has given the most pleasure in the last nine months

(since November 1982).
Our five categories are:

- Best Arcade-style Game, which goes to the cassette or cartridge which proves itself the most addic-
- tive and thrilling.
- Best Strategy Game, is the title bestowed on the finest cassette or cartridge to test the mind rather than the trigger finger — like a favourite adventure.
 Best Original Game Idea goes to
- a company which has come up with a game of a completely new type, unlike any board, arcade or computer game seen before.

 Software House of the Year goes
- To some rouse of the lear goes to the company which has earned the best reputation for quality games, good service and entertaining advertising.

Please enter this program in the £5,000 program competition

Program name:

Machine: Model:

Number of K needed to run it: K

Other equipment needed to run it:

Author's name:

Address:

Telephone No:

All entries will be the property of Calisto Software and the entrants will assign all rights, patents and privileges of their game to Calisto. No employees of Computer & Video

No employees of Computer & Viseo Games, Calisto, or their relatives, will be eligible to enter the competition.
All entries must be sent in with an original coupon from Computer & NOT A COPY.

original coupon from Compens of Video Games — NOT A COPY.
The judge's decision is final and no correspondence can be entered into. You can enter any number of pro-

You can enter any number of programs as long as each is sent in with a form from Computer & Video Games. Winners will be notified before October 30th.

COMPETITION COMPETITION CO

Game of the Year is the most coveted Golden Jovstick of all. awarded to the game which most impresses the judges in 83.

This game must first have won one of the previous games categories and where that has happened the second-place cassette is pro-

moted to take that title Initially we are leaving the judging up to you and want you to tell us your nominations in any or all of the categories.

Just pick out your favourite games and fill in the form below.

The title Software House of the Year is open to distributors of overseas software, but for the rest, we are looking for British-based games programmers.

Cut out the form below and make your vote for gaming quality count.

Send it to: The Golden Joysticks, Computer & Video Games, Durrant House. Herbal Hill. London EC1R 5IB.

NAME	CHARACTER TYPE	SCORE	WORLDS	FLEETS	SHIPS	ARTIFACTS	- BONU
ARKRAI	COLLECTOR	2490	16	11	124	16	0
CAPPEL	EMPIRE-BUILDER	1814	19	13	73	7	0
CATRIO	COLLECTOR	1740	16	18	129	11	0
AUSTIN	PIRATE	1562	9	15	31	2	8
ITEMIZ	COLLECTOR	1500	16	14	82	8	0
THEOCR	APOSTLE	1330	23	19	137	6	n
ARACHN	EMPIRE-BUILDER	1144	12	16	93	1	n
BUSHCT	PIRATE	1142	14	9	55	7	0
SICAIR	APOSTLE	899	12	14	188	8	0
COTELL	APOSTLE	812	11	12	33	2	0
BINGAR	BERSERKER	488	20	14	50	9	0
GZINTI	BERSERKER	262	12	11	89	6	0
THEDOK	MERCHANT	208	11	15	184	6	0
KSIFF	MERCHANT	160	13	9	55	6	0
MEGALA	BERSERKER	111	13	14	60	2	0
VICTORY PO	DINT LIMIT = 2,400 (M	AX 10,000)					

DID YOU TANGLE WITH THE STARWER?-THEN READ ON

Our Starweb game is now over but we hope that all of our readers who took part enjoyed the experience. Here's a message from one of the people who joined in, Mark Woolrich, and a rundown of the

"Overall Starweb has been an excellent name, becoming at times a time consuming hobby whilst still retaining the ability to be played quickly and with little thought should you find yourself busy with other things One of Starweb's best features is the

interaction with "red" players, (rather than semi-predictable "computer" players), in whom you could find all the better and worse traits of human nature and who give the game a complexity impossible to get from the computer

alone However, the game was not without its frustrations, the main one being the fate of all things of a lettery nature that are foolishly allowed to fall into the hands of the Post Office

One thing though, that is a fault of the game is the obvious imbalance between character types. You can see at a glance from the score sheet the types that the game favours.

Us poor Berserkers must be the result of a Xenophobic game designer, and as for the Merchants, their wealth presumably relies upon trust and goodwill both of which are notably lacking in a game where there's only one winner. In the Starweb rule book there is a hint that a handicapping system

might be introduced, but when? Finally, although I'm full of ideas on how to conduct my next game of Starweb as a result of my experience, I'm afraid the cost is too much at £30 or more per game.

However, I'd love to play Starweb again and again until I found a way for the poor underdog Berserker to come out on top. And after that I'd have a go at the Merchant type. Life's no fun without a struggle. Mark Woolrich. Formerly Gzinti Fleet Controller

	iinai positions.
Please accept the following not	minations for the Golden Joystick ards.
Aw	ards.
(BLOCK CAPI	TALS PLEASE)
1) Best Arcade Type G	ame:
By (Software house):	
2) Best Strategy Game:	
Ву:	1
3) Best Original Game:	1
Ву:	1
4) Software House of the	Year:
5) Game of the Year:	
Ву:	
Name:	
Address:	

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NEW PRODUCTS NEW PRODUCTS NEW PRODUCT

DIAMONDS **ARE MARIO'S** DOWNFALL!

KONG 64

ts are a girl's best friend - until they stop her being rescued from the clutches of a well-

In Krazy Kong 64, Mad Mario is once again faced with the task of rescuing his starlet girlfriend. But this time, he not only has to dodge the bouncing barrels, he must also gather up her scattered diamonds

Should he miss a diamond Mario has the risky job of backtracking his steps to collect it, at the same time dodging the everpresent barrels, before he can move on to the next level. The remaining levels offer further challenges with various objects to be collected.

Krazy Kong 64 is a one-player game and you'll need a joystick. It is available from Hampshirebased Interceptor Micros and all leading retailers at £7.00.

Also available for the Commodore 64 from Interceptor Micros this month, are Star Trek, an interstellar adventure game. Spriteman, based on the original arcade game Pacman and Scramble, all retailing at £7.00.

SIXTEFN

MANIC MINER lanic Miner is a sixteen screen

climbing game for the Sinclair Spectrum due out shortly from Bug Byte software of Liverpool. Based on the hit American game Miner 2049'er the idea of the game is to get your little character up to the final screen - climbing ladders - hopping on lifts and jumping onto plat-

Various obstacles will have to be overcome if you are to successfully get your little man to the top

or 48k Spectrum and will be in spills of the race track. the shops in July at £5.95.



ning Place beside the Mersey The new offices are a games

programmers dream with an enormous room for computers programers and the various tools of the software writers trade Above the programming department and offices is a compu ter tape duplicating plant which churns out all Bug Byte games.

ENJOY THE JET SET LIFE STYLE

ning around plush casinos in expensive clothing throwing away tens of thousands of pounds on a reckless gambling spree. If the answer is yes, but Daddy

doesn't own an oil well, then you may still be able to get a taste of the jet set with this latest game. You are Dominic - a wheeler dealer tycoon who prefers grind-

ing his opponents into bankruptcy on the roulette table in his spare time to putting his feet up in his luxury home Feel you can take on his per-

sonality for an afternoon on your Atari 400/800 - if so you'll need the latest cartridge from Bomb. Two other titles in this new range of games from the former video games manufacturers are Funny Tadpole and Indianapolys. The Tadpole game challenges

you to save poor little lost Bobo from being swallowed by the big fish in the tank Indianapolys is a car racing Manic Miner will run on the 16 game recreating the thrills and

The games are imported into The Liverpool-based firm have the UK by Pancom of Grimsby recently been celebrating their and sell for around the £15 mark.

INVADE!

That popular Bally Midway arcade game Gorf has now been licensed by Commodore and converted to cartridge for the Vic. 20 Four levels of attack are

nounted on your laser base as you struggle to repel the Gorfian Empire's bid to take over Earth. The first wave of attackers consist of Droid ships and UFO's

controlled by a single Gorf from a safe distance. The purpose of this first attack is to test your defences The real battle begins on level

two when a Gorf confronts you with Attack and Laser ships If you survive this level the Gorfs will know that they've got a fight on their hands and will send their toughest pilots - the Space Warp Fighters into the fray. They attack in spiral formation and are armed with tornednes which track your ship with deadly pre-

The final conflict takes place when you confront the Gorfian Flagship. Only the most skilled pilots should apply for this mission as you will have to blast your way through a force-field and then launch a prolonged attack on the ship itself. It requires several direct hits on the Gorfian flagship to eliminate it.

At the end of the mission you will be given a rank based on your performance. Six grades are awarded from Space Cadet to Space Avenger

Sign on for this challenge at

You will need a Vic-20 and £24.95 to join the good fight. Three other new games carts

are launched this month from Commodore for the Vic-20. Cosmic Jailbreak casts you as the keeper of the Cosmic Jail.

Stop the bad guys from all over the universe making a bid for freedom. More crime in Money Wars.

This time you play the crook trying to get away the lont. Menagerie provides your

chance to be a flea for an afteroon. Guide the tiny microbe on a perilous journey through a spider swamp, desert, and on to the mystical wall - hitching rides on other animals as you go. Money Wars, Menagerie, and

Cosmic Jailbreak are available now at £19.95.

TREASURE **HUNT IN** THE DEEP

batch of games from Dragon Data for this new machine.

The idea of the game is to get your diver safely down to the ocean bed pick, up the treasure scattered over the sea floor and get it to the surface without being devoured by the killer sharks which patrol the wreck. Also new this month is a chop-

per rescue style game entitled Whirlybird Run. You have to rescue the hostages whilst avoiding the attack of jet fighters and ground tanks.

The games are due out in July and will be available from Dragon dealers at around £10.

NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS NE

TOUGH TEST FOR ALL SPACE ACES

XENON

Fleet Commanders everywhere must prepare their pilots for the toughest test yet. The Aards. Pararatrons and the Zorgon Battle Star are massing on the outer reaches of Radon.

You are a commander in the Xenon Space Academy an organisation which protects affiliated planets from attack by pirates from other galaxies. The survival of Radon rests with your fleet. The aliens attack in three out for good and all.



- the Aards have the power to clone on destruction, defying your fleet to wipe them

Survive this onslaught and yo must fly on through meteorites skillfully refuelling until you arrive on Radon Once you have touched down

on the besieged planet you will soon be attacked by the Zoroon Rattle Star. This final challenge will draw on all your knowledge and skill acquired at the Academy if you are to repel its attack.

Yearn is a shoot 'em up for the 48k Oric from L.J.K. Software, The name is available now from the Blackpool based firm at £8.50.

Also new from IJK for the Orio is a two game cassette with 3D Maze and Breakout on it for £7.50 Candyfloss and Hangman are also available at £7.50 both for the 48k machine

SWFFT TOOTH IS AN ANT'S **DOWNFALL**

ROMOX

Ant-Eaters are a viscious breed with that sinister long snout.

The same snouts will be sniffing out Atari owners to play this latest game cartridge from You take the part of an ant

trying to dig your way to the surface to nick up sugar lumps and take them back to your lair. The ant-eater marches up and

down on the surface. As soon as you break the surface it can pursue you down the tunnels which you have already created in your bid to get the sugar

Ant Eater is based on the popular arcade game Dig Dug and should provide stiff competition for the official Atari Dig Dug which will on on sale next month

On the first screen you face just one eater but these increase one by one as you move up through the screens until there are three of them pursuing you. There are also rocks which you can make fall on your pursuers and delayed-action bombs which you can detonate by remote con-

trol to blow up the ant eaters. Three other new cartridges are on offer from this brand new Atari games firms — all in cartridge format.

Attack at CYG-4 is a scrolling shoot 'em up with various aliens and space sectors to be pene-

Princess and Frog is a Frogger type game and Fortune Hunter a

classic treasure room adventure. In Princess and Frog a busy jousting field takes the place of the usual Frogger motorway. Mounted knights rush back and forth across the screen - and the frog must avoid their deadly

lances. In the river you'll find snakes and serpents instead of logs and turtles. An interesting variation of

an overworked theme. The games are available from Atari dealers now or direct from Surrey based Romox at £29.99.

C & VG'S COMPUTER GAMES TOP TEN

3. Wacky Waiters (Imagine)

Cosmiads (Bug Byte)

6. Asteroids (Bug Byte)

7. Golf (Commodore)

8. Amok (Audiogenic)

Catch Snatcha (Imagine)

9. Alien Blitz (Audiogenic)

10. Choplifter (Creative Soft-

ZX81

- 1. Flight Simulation (Psion)
- 3D Monster Maze (New Generation)
- 3. Chess (Psion)
- 4. Space Raiders (Psion)
- 5. QS Scramble (Quicksilva) Galaxians (Artic)
- 7. Alien Dropout (Silversoft)
- 8. Avenger (Abacus)
 - 10 games for 1K (J. K.
 - Greve) Night Gunner (Digital
- Integration)

Sinclair Spectrum

- 1. Flight Simulation (Psion)
- 2. Jet pac (Ultimate) 3. Penetrator (Melbourne House)
- 4. Horace goes Ski-ing (Psion)
- 5. Acardia (Imagine) Transylvanian Tower
 - (Richard Shepherd Software)
- 7. Ah, Diddums! (Imagine)
- 8. Hungry Horace (Psion) The Hobbit (Melbourne
- (sevol 10. Space Raider (Psion)

ware)

Vic-20

1. Arcadia (Imagine)

2. Panic (Bug Byte)

- Atari 400/800 1. Qix (Atari)
 - 2. Galaxians (Atari) 3. Detender (Atari)
 - 4. Zaxxon (Data Soft)
 - 5. Pac-Man (Atari) 6. Star Raiders (Atari)
 - 7. Miner 2049'er (Big Five) 8. Centipede (Atari)
 - 9. Missile Command (Atari)
 - 10. Space Invaders (Atari)

N EW PRODUCTS NEW PRODUCTS NEW PRODUCTS NEW

RETURN OF THE WOOLLY JUMPERS!

VIRGIN GAMES

Games, the new spin-off from their record producing empire, have just arrived. Predictably there are several

space shoot 'em ups with titles like Starfire, Mission Mercury, Space Adventure, and Landfall. On a slightly more original note is a game called Sheepwalk for the 48k Spectrum. You control

Rex the sheepdog as he rounds up the flock that have escaped from the pen. Being careful not to let Rex get too close to the sheep to scare them he must also be swift if he is to stop the sheep of scare them he must also be swift if he is to stop the sheep destroying Farmer Brown's price radishes and beetroots. See the Reviews pages for our opinion on the game.

The second most original rebuild your craft in time belt agame in the batch is Bug Bomb for the BBC which challenges you to rid electronic grids which provide power for the cities of mutant buos.

Other games in the range include Yomp — a Frogger type game in which you have to get your soldiers across a busy road. Golf fans can also play the game on their Spectrum with a simulation for the 16 or 48k machine. Virgin games are in the

THE AWESOME ROBOTS AIM TO KILL!

ANDROIDS

shops now at £7.95.

If you think of cute characters like Metal Mickey when somebody mentions robots then forget it. Start thinking about homicidal laser-spitting death droids! In Androids, the latest game

from Sunshine Software of London, you are being pursued through a maze by the robots. You are armed with a gun though this has limited fire power and will have to be replenished from time to time by walking over the coloured squares.



Sunshine at £4.95. The game will up on the Spectrum in 16 or 48K.

Also new from Sunshine this month for the Spectrum is space shoot 'em up called Galaxy Attack for the 48k machine. Your ship has crashed on a distant planet. It's a race against time to rebuild your craft in time before the alien Walkers reach it and

GIVE YOUR GAMES SOME STICK!

CONVERSION

If you have invested \$70 in a joystick for your Spectrum and then when you got it home found that some of your favourite games are not joystick compatible then you will be pleased that a solution is at hand.

Kempsoft — the software division of the joystick manufacturers have written two conversion tapes.

The conversion tape is loaded into the Spectrum A menu appears from which you select the game conversion you require. This is then loaded and you then load your chosen game in the normal way.

Tape one converts Hungry Horace, Horace Goes Skiing, Flight Simulation, Arcadia, Penetrator, Spectrum Spectres and Space Zombies.

The tapes cost £4.95 each and are available from Kempston Micro Electronics of Bedford.

GAMES TO LAST A LIFETIME!

The next range of games will

take "half a lifetime" to get through all their levels. It is a range of three games due to be launched in early July, two of them on the Spectrum

and one on the Commodore 64.

As we go to press the details are few and far between but we do know a little about Zzoom (previewed right), and the other two are Zip-Zap (Spectrum) and a Arcadia (64). Both are arcade of games featuring more levels than

the average player will ever be able to accomplish. We can reveal that the company is Imagine Software of

Liverpool and the game is a 48k only cassette for the Spectrum.

Three games are to be previewed but according to Imagine the main reason for the trade preview is to show off the new

Already in the shops from the Liverpool firm is a new game called Jumping Jack. This is the first Imagine game written by a freelance programmer but, like the majority of the firm's other games, is based on an original idea.

You control a little character who appears at the bottom of the screen. Above him are several parallel lines — moving platforms which he must hop on to. The key

is to wait for just the right moment when the gap in the platform appears and then hop up at just the right moment. Each time you get to the top of

a screen you are given one line of a poem — providing an added incentive to get to the end of the game and discover the rest of the verse. Jumping Jack is available from most Sinclair software shops at £5.50.

We have 100 cassettes of Jumping Jack to give away this issue. See page 110 for details but be sure you're quick off the

EVIL BIRDS ARE OUT TO GET YOU!

Zzoom through the skies, blast your way through the enemy and try to save the last survivors of the human race.

Il This tall order is the object of the latest 3D challenge from Liverpool-based Imagine Softs ware.

The screen shows you a view

from your ship's cockpit. You have to fly over different land-scapes, rescuing the survivors and refuelling — this keeps your protective shields activated.

But watch out for waves of enemy aircraft, flocks of evilminded birds and surface-to-air missiles are all chasing you, bent on your final destruction.

the higher your score. This involves some daring low-level flying. Use your bombs and machine guns to protect yourself from the deadly aliens and their weapons.

Zzoom runs on a 48k Spectrum, is controlled with the keyboard or a Kempston or Fuller igystick and costs £5.50.



PLAGUE OF SWARMERS PODS AND BAITERS!

DEFENDER ACES TAKE UP THE ATARI CHALLENGE

prizes at the National Association of Boys Clubs Atari Defender Challenge Un and down the country

members of the association have been blasting away at the Pods. Swarmers and haiters to clock up high scores in the hope of going through to the final at the Hilton Hotel on Saturday 25th June

Of the 10,000 entrants just sixteen super skilled finalists will be firing away for the coveted title

Read on to find out!

of Defender supremo. You'll have to wait until next

They were an ugly bunch -

sion, the nasty Amidar pig, and

Superman's arch-enemy, the evil

superbrain Lex Luthor. We asked

you to place these tough characters, plus four other video villains

in order of toughness. Here in the

C&VG offices we worked out our

own order - which you may or may not agree with - but we're

the one who would give you the

most trouble on the video

Bomber from Activision's Kahoom Second came the cop

from Lock n'Chase, then the Ami-

running the contest, OK? Top of our tough villains list.

Pan stars David Van Day and month to find out the winner but I Gary Numan will be presenting can tell you some of the finalists clocked scores in the region of 100,000. Like Anthony Broons from the London Springfield Club who entered as favourite with a whacking great 113,000 and South West regional champ Stephen Harvey with alien-crunching 97,000

Can you heat the Atari whizzkids? If you've topped 120,000 dron us a line and tell us about it

The sixteen finalists will enjoy fun courtesy of Atari UK including a trip to the Thorpe Entertainment Park and a visit to the

cinema to see Return of the Jedi. The highest scoring Defender player will also take home a video cassette recorder and win an Atari 800 for his club. Runners up will receive the latest Atari game releases.

years' Atari champ. Craig Heap, from Manchester, wh **NEW GAMES** FROM **PHILIPS**



They are here at last - the first hatch of independently produced games for the Philips G7000 Sys-

VIDEO VILLAINS CONTEST WINNERS Versions of successful Imagic Games - Demon Attack and Did you spot the Video Villains in in Worcestershire. The lucky series of games including Turbo, Atlantis - are now in the shops Gorf. Zaxxon and Venture for his our June issue's special supple- winners will receive five brand ment, The Book of Video Games? new cartridges of their choice Colecovision system. We're not sure what Guy wants as he was

Are you one of our winners? courtesy of the new specialist video games shop in West at school when we called to tell Drayton - the Fasy Video him of his good fortune! that Mad Bomber from Activi- Games Centre. The ten runners-up will re-Brian has chosen Demon ceive five book-binder style

Attack, Auto Racing, Atlantis, video game cartridge holders. Donkey Kong and Gorf for his specially designed by Easy Intellivision. Miles has oone for a



for this name-starved machine. Demon Attack is one of the toughest shoot 'em ups available for the Atari VCS and should give a tough fight to Philips owners as well

Its multi-wave aliens look good as well as giving a trigger burning challenge just like the versions already seen on the Atari system Atlantis has also sold well on

the Atari and Intellivision machines and is therefore another obvious choice for Imagic to convert to the Philips. The game challenges you to protect the beautiful lost city of

Atlantis which is under attack from the surface. You have three cannon installations from where you must

attempt to blast the aliens. The games go on sale at the end of July at around the £25 mark. The Philips range of games

now makes Imagic the video games company with the widest number machines in its range. As well av the Atari VCS. Intellivision and Philips they now produce games for Colecovision. Vic-20, and the Atari 400 and 800 home computers.

Quest for the Rings, Lex Luthor from Superman and finally the fairly harmless desert nomad from Riddle of the Sphinx, answers out of the hat came from Brian Cobb. of Newark, Nottinghamshire, Miles Pennington from Hampton, Middlesex, and Guy Verbist from Malvern Wells

The first three correct



GETA KICK OUT OF YOU! THE BIG MATCH ON YOUR GAMES

Atari United make a pretty strong team. They thrashed me 10.0. 15.3 and by a couple of margins which I've got no intention of repeating here.

Three international superstars have been bought at staggering transfer fees and set in silicone to make one of the hardest to beat soccer games you can buy.

The new Realsports game is at its hest when two people play. Taking on the VCS itself is rather like Manchester United versus Stoke Pones All Stars on an off day

You can select the length of the game and choose whether to play against the computer or a friend. The pitch scrolls horizontally. Possession of the ball is maintained by depressing the fire button on the joystick. To pass the hall first select the

player you wish to pass to by pressing the fire button. This will make your three play-

ers glow white in sequence when the chosen player is white move the joystick in his direction and press fire once more.

Mastering the pass procedure is the key to getting full enjoyment from this game. It'll take a lot of practice to get it right but once you master it playability

of the cartridge takes a quantum leap forward A nice touch on this soccer

simulation are the sound effects. You get the cheer of the crowd and the referees whistle when a goal is scored. A major improvement on Atar-

i's earlier soccer cartridge. The game will be in the shops in July at £29.99

If you look hard enough you may still find a Pele Soccer in a faded how amongst all the new games. Chances are it'll be at a knock down price and, at around £20. it'll give you an adequate game football match at £10 less than the premium priced Reals-

ports cartridge. The old Pele cartridge differs from the new one in that it shows you a vertical view of the pitch with the players scrolling up and down screen.

Again you control three players though passing is much more of a hit or miss affair than with the new version and the graphics are very basic in comparison. The footballers look more like little robots than live flesh and

The computer makes a tough opponent - though not as tough as in the Realsports cartridge. out of the wall you've got to

replace it to score points. Intellivision owners have been included in the new Activision releases though still nothing for

vou G7000 namesters Happy Trails is the name of the Intel game and you play the part of a crockety old prospector searching the hills of the old

west for treasure. The screen is made up of a spaghetti junction of trails. You don't move the old chap - but move the sections of trail, jigsaw Dink which offers the best video fashion, to make a continuous

Happy Trails is the work of Carol Shaw of River Raid fame so The idea of the game is to the game has a lot to live up to. protect your little porker from the Don't miss next month's C&VG to big bad wolf who is huffing and read Joystick Jury's judgment on this new cartridge.

The third offering from Activi-Every time he blows a brick sion is for the Atari VCS - called



Pele Soccer has one really irritating frill

Fach time a goal is scored you are treated to a celebratory firework display This is quite pretty the first

time around but when the VCS has knocked in its twelth goal to your nil it becomes quite simply annoving. The third option for football

fans wishing to play the game on their VCS comes from Mattel and is just one of the games in the new M Network range. This will be the cheapest of

Another vertically scrolling game through you have four players instead of three as in the Atari cartridges.

M Network International Soccer will provide the real competition for Atari Realsports Soccer

when the few remaining Pele Soccer cartridges are withdrawn or snapped up. C&VG verdict on the Soccer cartridges - the Realsports version is the superior game though

if you buy the M Network game you may have enough spare cash to get another game or the trio retailing at around the even a new joystick to help you score the winner!

> Featuring a 3D perspective you are serving into the screen facing your opponent rather than the early horizontal pong-style tennis

The new Atari cartridge is an improvement on the existing

enables you to write in your name and that of your opponent. Authentic tennis scoring is a feature of both Atari and Activision carts and you can play against an opponent or take on

the computer

For superior graphics the Atari cartridge gives the most convincing game of video tennis though at £29.99 you may find it a oppd deal dearer than its Activision counterpart which has been around for a couple of years now and therefore selling at a reduced price.

CONOUERING CONVERSIONS Activision recently showed off

their new releases at a special press preview in London. The titles seem to underline the leading games firm's commit-

ment to developing original games rather than buying licences to convert hit arcade games like Atari and Parker The most original of the trio is

pigs I've seen and certainly puts track those pink blobs from Amidar in

puffing in his attempt to blow your wall down.

Seaguest and looked at first glance like the dullest of the Your task is to rescue divers

who are returning to the sub with treasures of the deep.

Seaguest is in the shops now at £29.95 as is Happy Trails at Activision Tennis cartridge. It has a score board which £24.95 (link will be in the shops in August, also at £29.95.

ACTIVISION'S GAME SET AND MATCH

With the top tennis stars slup ging it out on the centre court at Wimbledon many of you will be glued to the TV screen.

Should you decide to plug in your VCS between sets what better cartridge to choose from than Atari's new tennis challenge in the Realsports series





l'IDEO



SKIP THE SKIPPER!

A brief flirtation with Nintendo's Sky Skipper in the arcades way back in autumn of 1982 whetted my appetite for the forthcoming Atari version. Unfortunately it

has suffered much in its conversion.

The original boasted cute graphics which involved sharp joystick control to bomb gorillas over a city skyline and rescue

The gorillas hurled coconuts skywards and were dizzied by being hit on the bonce by the pilot's hombs.

The VCS version has a maze taking the place of the skyline and although the plane is capable of the same instant maneversing, it is more difficult to end up facing the right direction on a VCS joystick — and this is a game where control is critical.

Upon bombing (and dizzying) the gorilla, the player releases a series of caged birds or animals which he must then rescue by flying into them.

It is a game of millimetre control and usually ended with me convinced that had I hit the joystick to change direction but it

had not registered, very frustrating but not as addictive as it should be

The monkies do not throw nuts although clouds cause problems on later screens and the game speeds up considerably on the fifth screen difficult to achieve with regularity. Four skill levels and the usual Parker packaging for £25.95.

THE VERDICT

A game which badly misses the sharp cute graphics of its predecessor and becomes dull all too quickly. There's better to be

found in the Parker catalogue.

Action
Graphics
Addiction
Thoma

Having gorged myself on dozens of turns at Mattel's Burgertime it was with great anticipation that I plugged in the next cartridge from this company. Alas, Vectron is not in the same Jeanue.

The idea of the game is to fill in each screen with power 5 blocks and energise them. The blocks are made to appear by depressing the fire button on the side of the controller. Level a laser blast at it by manipulating

the block. When the play area is completely filled with charged blocks you can then go on to the next screen.

All the time you are trying to fill the screen you are under constant attack from the aliens. These come in different varieties and the toughest ones are saved for the later screens.

tor the later screens.

Each new screen is a different shape to the previous one and will necessitate a modification of strategy.

To fire your laser gun you simply move the disc in the direction of the target and the gun will fire automatically. An original game — but a far from

good one.

Everything on the screen appears to move except for your laser base which is a permanent fixture at the top of the screen.

You spew out laser fire in all directions without rhyme or reason as it is impossible to tell which is the main aim — killing the aliens or filling the blocks. The result of this is that achieving either giveslittle satisfaction. Vectron is in the shops now at

£29.95.

For a far better investment check out Burgertime or Pitfall.

THE VERDICT
An original idea — but a very dull game.

Action
 Graphics
 Addiction
 Theme

Smurf Rescue is the cutest cartridge ever to plug into a video games console. If anyone ever asks you how good are the graphics on Colecovision plug in the Smurfs and let them see for

The idea of the game is to rescue the Smurfette who is being held captive in Gargamel's castle.



As the gallant Smurf you must walk through fields, forests, caverns and finally into the spooky castle itself.

To thwart your rescue bid the evil Gargamel has trained bats, hawks and spiders who dive bomb you as you make your way to the castle. By pulling back on your controller you can duck down to avoid these.

As you walk along the path other obstacles must be hopped over such as mounds, tufts of grass, and fences. By timing your jump carefully you can land on just the right spot to pick up bonus points.

The graphics of Smurf Rescue

are what make the game. The bright colours and plodding walking movement of the Smurf make it very similar to the actual character.

To enhance playability there is an energy level rating which goes up and down according to how quickly the Smurf moves through the various stages.

Just one gripe — with the joysticks rather than the game itself — it's really difficult to manipulate the disk to make the Smurf run into a jump without the controller slipping in your hand. Roll on the new improved Colecovision sticks — these should improve Smurf and most other Colecovision games.

THE VERDICT
Beautiful to look at, but not the toughest game you'll come up

against.

Action
Graphics
Addiction
Theme





PLUG INTO THE

ARCADE Atari keep the arcade conver-

sions coming thick and fast with two new titles lined up for a September release. Galaxians will need no intro-

duction to the more seasoned videonamers as it was a monster hit in the arcades at the height of the nost snace invaders hoom in the early 1980's

It will be interesting to see how well it does on the VCS having been so long out of the arcades. My quess is that it may be just a little bit too late as there are already dozens of good shoot em ups already available for this machine - Demon Attack River Raid and Defender to name but

Slightly more up to date is the Atari home version of Jungle Hunt - Taito's Tarzan and Jane style adventure. You must rescue the fair maiden from the cannibals who have carried her off swing through trees - wrestle with crocodiles - all swashbuckling stuff for VCS owners.

On a more educational level come the first two Atari Sesame Street titles for youngsters. Cookey Monster and Sorcerers Castle will be in the shops soon

GAME MANUFACTURER

1 Phoenix

2 Pac-Man 3 Frogger Vanguard

Atari Atari Parker Atari 5 River Raid Activision

MANUFACTURER GAME

CRS 6 Donkey Kong 7 Defender Atari 8 Me Pacman Atari

9 Demon Attack Imagic 10 Space Invaders Atari

All the above cartridges are produced for the Atari VCS home video games centre.

TOP TEN

with more educational titles on the way for Christmas. The games licensing business

is hotting up with several big arcade games being bought up by Atari, Colecovision and Mat-

Atari have Pole Position, Pengo, Joust and Moon Patrol all poised to attack the Christmas market. Neither of Atari's main rivals on licensing - Parker Brothers and Coleco — are going to sit back and watch this new batch of games arrive in the shops unchallenged.

Tutankham. Parker have Q*Bert, and Super Cobra, all of which will be supported with the traditional Parker TV advertising The Colecovision trump card

Donky Kong Junior, and the new video game! Every time you by a Super Zaxxon - though the main can from an American made thrust of Coleco's TV advertising vending machine you get a game campaign is likely to concentrate on a video machine. on selling the Colecovision itself.

titles signed up from the go every time you buy a coke. Japanese arcade aces - Data Fast

Also in the pipeline is a fantasy mad-race game where your car can leap into the air. One thing is certain - even when you are not using your TV set with your games consul you are going to see a lot of games

THINGS GO

months

Coca Cola - that famous soft games will be Buck Rogers, drink - is now available as a The new vending machines up is still a mystery.

Intellivision owners will share have a built in screen measuring some of the action with three hot 6 by 4 inches which gives a free The game is called Catch-a-Coke and you play the part of a

Rurgertime and Mission X hard-pressed delivery man who have already been converted for is being showered with coke cans by a mischevious monkey perched at the top of a palm tree. The more cans you catch the greater your score. To stop long queues gathering

at the coke machine the game has been made so tough that it will only last around 20 to 30 on television over the next few seconds. The owner of the machine can adjust the skill level to make it still tougher if neces-

sarv Coca Cola say the video game is as a sales tool and believe it will encourage America's army of games-mad teenagers to buy more coke! One of these exciting new machines will be coming to this country during the summer - but exactly where it will end

S TO A TOP PRIZE! fused games player (right) and And just as I was about to

beat Derek's Laser Space Blast record, I jerked to the right, the joystick wire taughtened and went spinning from my hand. Helpless I watched as the aliens took my last life." Every TV gamer has a story

like this. A sorry tale of crossed wires, joystick plugs loosened at critical moments and fistfuls of flex.

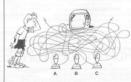
We're offering the chance for five of our readers to end joystick jerk forever. There are five Cynex Remote Control Joysticks to be won in our Crossed Wires com-

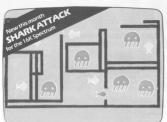
Look at the picture of a con-

see if you can work out which Unfortunately a weird tangle

of wires has made the choice more difficult than it ought to be. If you can work out which joystick our gamer should pick up. send it in to Crossed Wires, Comnuter & Video Games, Durrant, House, Herbal Hill, London EC1R

We need to receive your entry before August 12th, then the first five correct entries out of the hat win a Cynex joystick worth £70. Usual Computer and Video Games competition rules apply





GAMES THAT ARE

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TOP SECRET... Robert to all readers... message begins... After a tough journey! Ye managed to get right into the C&VG office while remaining inconspicuous. With great difficulty! Ye erected a transmitter on the roof so that I can send my reports safely without them being intercented.

intercepted with There were bugs everywhere. But not any more. The office is now completely free of bugs and I shall stay here for as long as it takes to ensure that this region of terror can never return. I'll be reporting monthly on any infiltration of the magazine's pages, and will keep you informed ... message ends.

All bugs have now been banished, never to return, and the computer room has been pronounced bug free. All that remains to complete the clean up is to expose those bugs which were in residence before I arrived.

ATARI — TEN COMMANDMENTS

Firstly there was the Ten Commandments game for the Atari on page 54 of the June issue. Many of you were having problems with line 14093. I have now been assured by the author that this line is not necessary and may simply be deleted.

ORIC - SNAKES

Although Snakes for the Oric on page 53 of June's issue was bug free when it left our reviewer, Mal Function appears to have crept in while the printer's back was turned.

The small squiggle in line 30 is supposed to be a quotation mark, and the one after line 150 is, as most of you realised, the start of line 160.

reassed, the start of line 100.

Not content with interfering with the printing, Mal has also changed the keys which the instructions say are used to control the direction of the snake.

Despite the printed instructions the snake is controlled as follows: 7 up, 6 down, 8 left and 5 right. You can alter line 130 to use any keys you wish; I preferred Q and A for up and down and C and V for left and right.

If you wish to use the cursor keys as in the instructions, you will have to substitute the letter in quotes in line 130 to read CHR\$(X) where X is 8, 9, 10 and 11 for left, right, down and up respectively.

Another tip for Oric owners comes to us courtesy of the Tangerine Users Group. If you intend to use a lot of string space in your program, you may find that the strings overwrite the character set in RAM. This can be cured by making the first line of your program HIMEM—#9TFF.

VIC 20 — GHOST TRAP Although the instructions say otherwise, use the Z and X keys to move left and right. If you'd rather use the cursor keys as printed, change lines 104 and 105 to IF X=31 and 23 respectively.

BUG HURIEK

TI 99/4a — SKI-ING

Texas owners, I admit, have suffered badly at the hands of the bugs. Most recently there was the Ski-ing program, for which we sent out many hundreds of correction sheets with what we thought

was the definitive version.

Well, it was . . . almost! The screen positions for the gates are held in DATA statements as screen coordinates but

they appear to be the wrong way round in their pairs.

To correct this, alter the READ statements in lines 290 and 360, 290 should

now read READ B,A,C and 360 should be READ B,A. The program will then work. I know — I've played it myself.

SPECTRUM — CANYON LANDER

Another attack on our instructions came in Canyon Lander for the Spectrum in the May issue on page 68. Although the instructions say that control is through the I and O keys, it should read 1 and 0. This is controlled by the IN statement in line 110 and can be changed if you wish. The relevant IN locations are in the Spectrum manual.

VIC-20 — PROTECTOR

Not really a bug this, but it puzzled quite a few of you struggling with Protector for the Vic on page 46 in June. When run, the program appears to stop and do nothing; it is in fact waiting for you to start the game by pressing the fire button on the joystick. This is accomplished in line 90 and can be altered or removed if you wish.

HINTS AND TIPS

As far as I know, the bugs are now extinct — at least until next month. Remember, this is the page which you help to write. So if you have any suggestions about how a C&VG program could be improved please send it in.

We would also like to know about any tips for micros in general. I'll pay £5 for any which are published. Tips for this month are for the Sharp and Vic-20. Mad Max, published for the MZ80K in May 83. To allow the program to work with disc Basic the program should be altered as follows:

Replace POKE 17828,0:GET A\$ with USR(ST):A\$=CHR\$(PEEK(53247)) and install the machine code by adding these two lines:

6 LIMIT53239:ST=53240:FOR XT=0 TO

6 READ DA: POKE ST+XT,DA:NEXT 7 DATA 205,27,0,50,255,207,201 Also, says J. Leonard of Penzance, if

Also, says J. Leonard of Penzance, if the last variable on line 515 is changed to D\$ then the right person will get the credit for the highest score.

Final tip is for Vic owners trying to use a 16k expansion to play Logger from the April issue. It comes courtesy of Mike Davies from Dyfed, Wales. Before loading listing one, load the

following program: 1 POKE 36869,PEEK(36869) OR 13 2 POKE 9216,0:POKE 9217,0:POKE 9218,0

3 FOR A=43 to 50:READ B: POKE A,B: NEXT 4 NEW- DATA 136336336336

4 NEW: DATA 1,36,3,36,3,36,3,36 Then change listing one: Line 5 becomes POKE 36879,25 and 65 starts:

FOR I=5120 TO 5631 . .

Finally change all values in listing two between 7680 and 8185 by subtracting 3584, then change all values between 38400 and 38905 by subtracting 512.

To complete the change, change CL in line 430 to read CL=33792.

To return your computer to a 16K machine after playing the game type SYS 64824 and all will be normal.

Finally, for those Sinclair owners who wondered why there were two Spectrum programs in July and no ZX81 programs, Zax's V is in fact for the ZX81 and not for the Spectrum. Crossed wires in our production department!

BY ROBERT SCHIFREEN

Write to me at: Bug Hunter, Computer & Video Games, Durrant House, Herbal Hill, London EC1R 5JB



Announcing more exciting programs for the BBC.

Acornsoft is the software division of Acorn Computers, the company that designed and built the BBC Microcomputer. Here are four more exciting programs, all designed to get the most from your BBC Wice.

Magic Garden (18935) is a cassette based on Shirley Conran's successful book. It's a problem-solving program which provides the complete beginner with instant answers to the questions of what to plant and where. Simply tell the computer whether you prefer a shruh or a flower, the type of soil, light and shade conditions and required flowering time and the computer will come up with a selection of possible plants.

<u>Praughts-Reversi</u>(£9.95) is a cassetter containing two traditional board games for you to play against the computer. Both give a graphic display of the board on the screen and you can enter your moves with either keyboard or jostick. The games can be played at varying levels of difficulty and on the higher levels you will find the computer to be a very worthy adversary.

Hopper (£9.95) is a game on cassette which can be played with either keyboard or joysticks. Hop the frog across the busy motorway trying to avoid four lanes of fast-moving traffic. To get across the river to the frog's lair you must leap on to the logs and turtle's backs, but beware of the diving turtles, the crocodile and the snake.

BCPL (\$99.65) is a flexible modern structured language that's very east to learn. The package consists of a BCPL language ROM, a 40/80 disc and a 450 page User Guide. The disc contains the BCPL Computer, a Screen Editor and a 6502 Assemblee. BCPL is particularly sood at handling Input and Output and is ideal for writing utility programs and to develop games and commercial packages.









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SPACED OUT LASERS hand at Astron Belt as soon as



pinball with becoming a famous film director? That's the offer

being made by the Pinball Owners Association The association is planning a 30-minute video about their favourite pastime - and it will be produced by a top video company based in London. All you have to do is come up with an

original idea for a script. If you want details of the competition, which was launched recently by the association, or if you reckon you have a good idea for the screenplay, write to the Pinhall Owners Association at "Arcadia" 465 Cranbrook Road, Ilford, Essex IG2 6EW.

You can also help out the association by telling them where there's a good pub with some pintables! They have been forced to move from the pub used for monthly meetings because all the pintables have heen taken away. So members are looking for a good pub in the Greater London area that has a couple of tables and would wel-

come their custom. Any ideas? Things are quiet on the pinball front at the moment with few new machines hitting the market. However Gottlieb are bringing out a machine called Royal Flush. This is hardly a new table to pinball fans as it's a remake of an older electromechanical game. With Bally rehashing their classic Eight Ball Deluxe machine recently perhaps this shows a lack of new ideas among the manufacturers. But with innovations like the still mysterious Williams Joust double ended machine, perhaps we're talking

Good news from America is that the home of the pin is seeing a small revival in interest in pintables among arcade owners. They are finding that a reconditioned table often takes more cash than one of the older and less popular video games.

30 COMPUTER & VIDEO GAMES

British arcades with the exciting Astron Belt game. As we write Arcade Action this month, still only two of the systems have found their way

arcade at Leicester Square in In the search for ever-increasing realism, laser disc gameswhich use film rather than computer graphics-seem to be the future. And the arcade industry is

keen to get to grips with it. Astron Relts before they ever reach these shores and the machine is being hailed as the saviour of arcade gaming.

But as in most pioneering ventures. Astron Belt has a few rough edges as a game and should be judged as a hint to within the next year.

The game is set in space and features a Buck Rogers type craft, composed of computer graphics, superimposed on a

real life" background. As the player controls the craft it swings across the screen, while hehind it, the laser disc film features dark moons, arid planets, sunsets, a dreaded black hole and all the other scenes you might expect to find on a space odyssey.

The flight takes you over alien landscapes through

eatheter like space stations and up against the enemy craft. The game reacts to your fire by exploding ships which it judges you have hit, and turning the screen into a blaze of fire. an arcade-the Crystal Rooms

The controls in the cockpit feature a futuristic steering wheel set in front of a large 26' colour monitor but the game also comes in a stand-up cabinet with a standard screen and joystick

Laser discs do not wear and are easily changed, so that a cabinet-once installed can be altered to provide the latest game. Rumour has it that the next laser disc game available for the Astron cabinet will be a driving game composed of real race scenes and even cars driven by recognised grand prix stars

So you could line up on a starting grid next to James Hunt! Realism in the cockoit model is enhanced by a stereo sound system which emanates from just behind the player's ears and a vibra-seat which gives realistic vibrations which are supposed to tie in with the game. Actually it explosions for more than is com-

> On the monetary side it's 40p a turn or £1 for three goes which shows the expense of producing these cabinets. But any arcade player

However, it remains to be

seen if Astron Belt is the shape of games to come.

And if you want to see as much scenery as possible, put in plenty of money before you start as the game will let you continue from where you left off.



TIME TO YOUR PICT! HADRIANS WALL

The Pictish invasion is over with the Romans victorious-which is pretty tough if you're a Pict on the wrong side of Hadrian's Wall.

That famous feat of Roman engineering is the setting for a new name which hears little resemblance to early A.D. history. You play the part of a last survivor of the Tartan hordes,

stuck behind enemy lines and wanting to get back to the glen. Armed with a joystick and a iumo button, you run along the battlements jumping over cracks in the wall and dodging fireballs and arrows flung at you by the pursuing legions.

A solitary Roman occasionally patrols the most below the wall and will fire rocks and arrows up at you which have to be dodged It is all set against a timer and if you can't complete each part of the wall in time, then you may face the dread Roman on the wall. He comes straight for you and there's little hope of escape.

If you do manage to get to the top of the wall then an ancient Roman escalator will take you the river and freedom. Jump into

your boat and away you sail — FILM MAITH FIDED ALLS

your boat and away you sail —
down the river Scramble fashion
— until you are back in familiar
territory

Back in Loch Ness and who's there waiting for you? Nessie rears her head from the depths and before you can smooth your will, you have to rush over and send her packing — back to the primeval murk while you go back to the wall to bring the next Pict home... only this time the going outs harder more arrows. less

CAPITAL OF THE VIDEO GAME WORLD

OTTUMWA

If you fancy yourself as an arcade champion then there's now a way to get your score

register around the world.

A place in Iowa State in the US, going by the unlikely name of Ottumwa, has set itself up as the arcade games capital of the

The Video Game Manufacturers' Association has approved the Ottumwa set-up and the town now houses the only official international scoreboard for video

Players call in their scores by phone and have them registered after being verified by the local arcade owner. It is currently receiving 50 to 60 phone calls a day at 01-01 515-684-6421 (from Britain) and ask for Walter Day.



FUN WITH FIREBALLS

Asteroids were mean but at least they travelled in straight lines. In Mad Planets the rogue heavenly bodies having developed homing instincts will prove decidedly tricky for all space skippers!

instincts will prove decidedly tricky for all space skippers! A Buck Rogers joystick-complete with fire button-and a spinning paddle lie between your

craft and collision course.

The planets wheel on to the screen as red fireballs, rapidly turning into Earth-like planets complete with orbiting moons. While in fireball stage the planets are vulnerable to your fire but otherwise they are invulnerable and their moons must be oicked off first.

The moons sometimes fly out of orbit, turning into red dust and, if ignored, these too will turn into planets. If too many planets survive on the screen a rosy super planet will be spawned by one of

MAD PLANETS

you must first blow up all a planet's moons — it then turns red and becomes vulnerable. It also hurtles around the screen as its orbit decays.

A cleared screen results in a fresh batch of yellow fireballs and then you move on to purple ones. If you succeed in clearing this third onslaught, then comes a bonus screen in which spacemen fly through the void.

men fly through the void.

These must be collected for bonus points and blowing up a rushing metero will increase the number of spacemen on screen.

number of spacemen on screen.
Good graphics and speedy action in which you can never let your finger stray far from the fire button. One tip — don't get caught in the corners.



E.T. — ARMED AND VERY DANGEROUS! KOSMICKBOOZ'R

The story continues after this new extraterrestrial phones home in Kosmik Krooz'r.

In this video game, your mission is to guide Krooz'r back to his own galaxy light years away. The ugly little devil has far worse than FBI agents and scientists on

The journey is beset with problems and obstacles are thrown up by the evil aliens who are out to get Krooz'r.

Luckily he is well-equipped with lasers and he can fire back. When the enemy gets too close, you have to look for the smart bomb button or the energy shield.

The smart bomb turns green and that's your signal to unleash it. As you wander homewards between the planets, it is sometimes necessary to drop in to the intergalactic garage and try to

buy up a few spares to get a decent space craft together. A few items like a fuel tank, a box of bullets or a motor and Krooz'r could soon have a ship

worthy of another base.

Eventually the mothership comes onto the screen and when one of the three entry ports lights up Krooz'r can be guided into the

onboard beam.

But take care, a slip on the timing here and its back to Earth and another handful of 5 pences.



ALIENS IN STEREO

GYRUS

From the outer reaches of the Solar System, you command the spaceship Gyruss on its journey to Earth.

You approach each planet in a

rou approach each planet in a circular orbit, starting with far-off Neptune. Each planet is the host to a horde of aliens eager to get out of the confines of their atmosphere to launch an attack against you.

Exarsions, Petarions, Terarions and Gigarions make up the alien fleets and your job is to

attack them while they are still a distant blur in the distance. An eight-way joystick and marvellous stereo background

out of the ordinary. There are 23 stages as from Neptune you fly to Uranus, Saturn, Jupiter and Mars, on your way back to Earth.

Every four stages, you enter the chance stage where your craft is invulnerable to the attacks of the Zigmas and Dogmas. A good chance to boost the score. An additional advantage of the

Gyruss game, is that a successful commander can take over his vanquished enemies' fleets and (like Tacscan) move more than one fleet in formation.

The quest finishes before a good graphic representation of the



By PAT NORRIS

ind a suitable new home.

ts are about to meet for the final
galaxy. The future of earth rests on
one has been strewn with space connect on the Iringe of our galaxy. The future of earth rests on the outcome. The battle zone has been strewn with space mines — and large asteroids are also in the area. Thus the scene is set for this two player space battle.

The earth fleet is represented by yellow symbols, the alien fleet by green. Space mines are represented by blue dots, and

i=4: IF 1 >4

148 IF h(t)>9 THEN GO TO 154 149 FOR (=1 TO 25 150 PRINT ST d(t),a(t); INK 7; RIGHT 1;CHR\$ (P(t)+144) 151 IF INKEY\$()" THEN GO TO 16

THODE? (x,m,f,h,t+c 170 INPUT ;": +C+m.t+C+f) . 172 LET tm=0



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875 PRINT AT 20,0; INK 7; Another game? (y 880 IF INKEY\$=""THEN PKINT HI 20,0; INK 5;K\$; IN Another game? 19 of 10 880 IF INKEY\$="" THEN RUN 1 IF INKEY\$="" THEN RUN 1 801

GD TO 880 PRINT AT d(t),a(t); TNK i;





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INK 5, I d(t),a(t); BRIGHT

d(t),a(t); BRIGHT

9

PRINT AT 19,1 PAUSE 200: INK 10: CLS GO T As a member of the intergalactic peace force you are making one of the yearly checks on the planet Weidoo — only to find that it has been attacked by some alien force.

As you search the outer dome, which has been badly damaged. You sense that you are being followed. After a quick radar scan you detect an alien being following you.

As you are on a peace mission and unarmed, your only chance to escape is to build a force wall around the alien so that you can capture and question him.

On the planet Weidoo the low gravity gives you great strength to move the portions of brick wall around. But you must watch out for your oxygen level, which is displayed at the bottom of the screen.

VARIABLES: FNY

FNX Finds X coordinate. Finds Y coordinate. n Difficulty level.

P Your position. L Aliens position.

PI Number to add to P to give new position

K Number corresponding to key held down.

Ħ Number corresponding to joystick position.

Position to test for bricks. ŭ Number to add to L to give new alien position.

TP Random number to add to L if blocked

TI. Time when finished. SC Score.

HI High-score.

298 IFPEEK(L-1)=320RPEEK(L+1)=320RPEEK(L+22)=320RPEEK (L-22) #32THEN299

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415 MESTOME 420 FORI=8T010:FERDR:FOKE36875,A:READB:FORJ=8T0B*200:NEXT:POKE36875,0 INEXT (00T0668 -28 BERICKUP98"

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BY PHILIP SMITH RIINS ON

AN UNEXPANDED

VIC-20

JOYSTICK OR KEYBOARD





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110 ON ERROR GOTO 1500 120 VDU 23,224,255,255,255,255,255,255,255,255 130 VDU 23,225,1,7,15,27,63,97,99,240 140 VDU 23,225,1,7,15,27,63,97,99,240 150 L18mCHPW(225)+CHPW(226) 158 L1#=CHR#(225)+CHR#(226) 160 VDU 23,228.24,24,126,126,255,255,255,255 170 VDU 23,229,34,2,89,231,45,23,2,3 180 VDI 23,230,23,76,34,2,45,129,67,56

320 ENSHCHR\$(228)

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470 PRINT TABK 1.20).CHR#K 136)" Press the SPACE BAR to continue" AB#*INKEY#K(0)'I
AB#" "THOU ABB ELSE AT. 488 XFX11

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Des 2013-16 409 IF 1:0980 THEN BOURK-75.1F BX/S8THEN BX*50 668 IF 1:0980 THEN PROCENT(\$6:475,128.88.8)-PROCERIN(\$8:128.88.5)-GOTO718 679 IF 1:0980 THEN BROCKETS-1:ERD:1108.1FM: BX+1108 680 IF 1:0980 THEN PROCERIN(\$6:475,128.88.8)-PROCERIN(\$8:,128.88.5)-GOTO718 con to the 22 OF The 13 THEN FLOWFLIX-1 PROCEIRE GOTO 720

780 FROUGHTS:
718 GOTO730
728 IF FLXX: THEN SHIPX=SHIPX=1:LDX=1:GOTO928
738 IF HITX=1 OR LDX=1 THEN 748 ELSE 768
740 SXX:MNDX 908)+28:SYX=958

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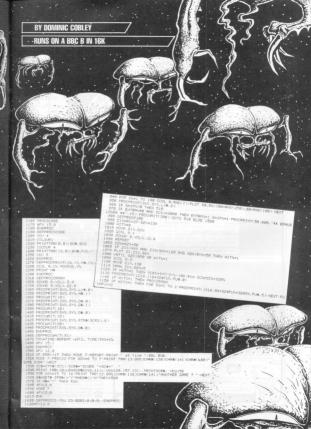
00 920 MISSX=0:FOR SX=50 TO 250:SOUND 17.VOLX.SX.1:NEXT:SOUND 0.VOLX.22.12 930 FOR SX=1 TO 250:GOL 0.RNDX7:HDVE 8X-75+RND(280),50+RND(150:DRRN BX+27.90



Remember the mutant Landers from Defender, the big-daddy of all video games? Well, they are back — and twice as mean! They are still out to attack all human life wherever they find it! Mové ur laser base and noot down the werving land rm down they swa

towards the planet's The higher the lander is when you shoot it the more points you score. You ose energy each time you fire - but regain, it if you manage to

hit a lander If you run out of energy, crash into a
lander, or let two
alien draft tand you'll
lose a life. The game
ends when you lose
all three lives, and
you get an extra life
at 2,000 points.



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MATRIX

(GRIDRUNNER 2)

MATRIX



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"Your spacess" that stack the descending aliens and frustrate their evil intert. If your spacess that the property of the state of the state

pysions, 63,60 = 500 P e P.
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This is VC 20 cross breed between the now famed Pischmen' and the game 'Quir. Br
in machine code, fast and fun with pysick controls, uses Hi-Res colour graphics. BK or
in machine code needed. Cnly 55,00 + 500 P 8 P. complete with instructions.

COMMODORE 64

CUMMOUDHE DR. PARTACKO PLAN MATTACKO PLAN MA

LLAMASOFT! YES

YES. HE'S DONE IT AGAIN SEEE MINTER's done it again, not only is



ROX-64 is challenging game involving the delence of your lunar base from a di-bot as a drower. Pro-64 includes amazing price graphics displays and spacy so effects, and an executive mothership; display if you win the game. To 01 socret stated along with their names. This program shows just what can be achieved us only Commodore-64 basis. Study the listing and learn how to use spriles and sount that outstanding matches. (23.00 + 50 p. P. 8. P.

prestrunner 64.

The figure for the Vic tas been improved for your COMMODORE 64.

By the Mo 1 best game for the Vic tas been improved for your COMMODORE 64.

And the sequence the ignitive fact challenge of the Common figure for the SA. Features 31.

The sequence of the SA. Features 31.

The sequen SPECTRUM

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SUPERIORIEEX (48K) involves around the screen into the power pods keeping away 3 ourse 5 dr. the space involver, around the screen into the power pods keeping away of course from the devi who chases you around the screen. Steer with your Deflex sheets, but bewere the mines or you may be burned alive! Superio graphics and lastratic sound on the 48K Spectrum only. Only 52.50 on casserter + 50,0 P. & P. ATARI 400-800

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The tortuous twists and turns of this 3D maze will intrigue even the most jaded Pacman player! You'll find yourself within the walls of a graphically stunning maze — even more baffling than the one at Hampton Court. But before you start be warned — there are monsters stalking the corridors and deadly pits which must be avoided at all costs during your quest for the way out. To help you get out there is a map located somewhere in the curious corridors. Once you have found that all you have to do is avoid the lurking monsters and find ladders to help you deal with the pits! An added attraction are the transporter rooms, located behind a set of sliding doors which you'll find dotted around the wemmu a set of shuring upons written you is mite ducted and under maze. These transporters will help take you to different parts of the maze — but offer no real chance of escape! If you see a pair of ladders on your journey through the corridors, pick them up. You'll need them to cross the pits. If you fall into one of these holes in the maze floor the game ends. Ladders unfortunately cannot be transported so you'll have to drop them if you want to enter a transporter room. Monsters in the maze are extremely intelligent beings and will follow you the best factic is to run away! If you suddenly vanish for no apparent reason a

The map is the key to your freedom. It is represented by a black square and is monster has leaped on you from behind! located in one of the many corridors. If you find it pick it up using the fire button on your joystick and then press "M" on the keyboard. You will see a plan view of the maze and the all-important transmat beam which will take you to freedom. This is marked by a cross. The map also shows your position and the direction you are facing. You must use the information to work out the best route out of the maze. There are four skill levels — if you manage to escape the first time round!

10 GRAPHICS 0:POKE 752.1:CLR :RESTORE :S ETCOLOR 2,0,0:POSITION 13,11:? "SKILL LE VEL ";: INPUT LEV: IF LEV>4 THEN 10 20 POSITION 12,11:? " HANG ON! 30 DIM M(15, 15):DIM J(4):DIM K(4):DIM L(4):DIM X2(4):DIM Y2(4):DIM A\$(1):DIM M\$(10):DIM R\$(4)

40 Ms=" DLCT'eX":Rs="NESW":ST=1:LA=1:CH =1:LD=0:IN=10 50 FOR D=0 TO 15:READ I:M(D,C)=I:NEXT D:

C=C+1: IF C=16 THEN 70 60 GOTO 50 70 FOR D=1 TO 4:READ A,B,C:J(D)=A:K(D)=B

:L(D)=C:NEXT D 80 RA=INT(RND(0)*2+1):IF RA=1 THEN M(8,1)=7:M(14,6)=5:GOTO 100

90 M(8,1)=5:M(14,6)=7 100 B=8:60SUB 130:B=5:60SUB 130:B=5:60SU

110 B=4:FOR A=1 TO LEV#2+5:GOSUB 130:NEX TA

120 C=0:60TO 150 130 X=INT(RND(0)*13+1):Y=INT(RND(0)*13+1): IF X<9 AND Y<4 OR M(X,Y)<>2 THEN 130

135 IF M(X+1,Y)=4 OR M(X-1,Y)=4 OR M(X,Y +1)=4 DR M(X,Y-1)=4 THEN 130 140 M(X,Y)=B:RETURN

150 FOR A=1 TO LEV

160 X=INT(RND(0) *5+9):Y=INT(RND(0) *5+9): IF M(X,Y)<>2 THEN 160

170 X2(A)=X:Y2(A)=Y:NEXT A 180 GRAPHICS 6:POKE 752,1:SETCOLOR 1,0,0 :SETCOLOR 2, LEV*3, 14: SETCOLOR 4, LEV*3, 14 LADDER MAZE BY P.B. JOHNSON"

250 X=1:Y=1:R=3:GOTO 270 260 X=X-F*U:Y=Y-F*V:DR=0:POKE 77.0:POKE 764,255: IF TA=1 THEN X=X+U: Y=Y+V: TA=0 270 FOR A=1 TO R: READ U, V, W, Z, D, P: NEXT A

280 Q=42:S=0:G=25:H=0:F=0 290 Q=INT(Q/1.445):G=INT(G/1.41):F=F+1 300 X=X+U:Y=Y+V:D=M(X,Y):IF D=1 OR D>=3

THEN 330 310 D=M(X+W,Y+Z):ON D GOSUB 450,470,500, 470, 470, 470, 470, 470, 470

carried out entirely by the joystick. The fire button is used to open doors and pick up items. The key to the Map is as follows: D=a door, T=a transporter; L=ladders: CIRCLE=a pit; @ a monster

The random number generator in line 1440 determines whether or not the monsters move or not at the moment it is set to a 40% chance. But it can be lowered or increased to make the game more or less challenging. No matter what skill level you will always be able to reach a pair of ladders or a transporter when first starting.

320 D=M(X+D,Y+P):ON D GOSUB 530,560,590, 560,560,560,560,560,560:GOTO 290 330 ON D GOSUB 620, 1,650,670,690, 1,720,7

30.740.770: IF D>3 THEN 310 340 SETCOLOR 0, LEV#3, 0: SETCOLOR 4, LEV#3,

14: RESTORE 970 345 X1=X-F*U:Y1=Y-F*V:D1=M(X1,Y1):D2=M(X 1+U, Y1+V): GOSUB 1600

350 N=STICK(0): IF CH=1 THEN 360

355 IF PEEK (764) = 37 THEN 1100 360 IF N=13 THEN R=J(R)

365 IF N=11 THEN R=K(R) 370 IF N=7 THEN R=L(R): IF N=14 AND F=1 A ND D=1 THEN 350

375 IF N=14 AND F=1 AND D=1 THEN 350 380 IF N=14 AND F=1 AND D=3 AND DR=0 THE N 350

385 IF D1=4 AND LA=0 THEN LD=1 390 IF N=14 AND F>1 THEN TA=1

400 IF D=3 AND F=1 AND DR=0 AND STRIG(0) =0 THEN GOSUB 430 405 IF N=14 AND DR=1 THEN TA=1

410 TI=TI+1: IF N=15 THEN 350

420 GRAPHICS 6+16: SETCOLOR 0, LEV*3, 14: SE







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```
770 COLOR 1: PLOT S. 95-H: DRAWTO 159-(S+O)
                                               1330 IF M(X1+U, Y1+V)<>2 OR LA=1 THEN RET
 .95-(H+G):PLOT S+Q.95-(H+G):DRAWID 159-S
                                              LIDAL
  95-H: RETURN
                                               1340 IF STRIG(0)=0 THEN 1380
 800 DATA 1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
                                               1345 IF CH=1 THEN 1350
 810 DATA 1,2,2,2,2,3,2,1,2,1,2,2,2,2,2,1
                                              1347 IF PEEK (764) = 37 THEN 1100
 820 DATA 1,2,1,2,1,1,2,1,3,1,2,1,2,1,2,1
                                               1350 NESTICK(0)
 830 DATA 1,2,1,2,3,2,2,2,2,2,2,3,2,1,3,1
                                               1360 IF N<>15 THEN RETURN
 840 DATA 1,2,2,2,1,3,1,3,1,2,1,1,2,2,2,1
                                               1370 GOTO 1340
 850 DATA 1,3,1,1,1,2,1,2,1,3,1,1,3,1,1,1
                                              1380 LA=1:M(X1+U, Y1+V)=5:Q=29:G=17:S=0:H
 860 DATA 1,2,3,2,2,2,1,2,2,2,2,3,2,3,2,1
                                              =0:GOSUB 690:GOTO 1170
 B70 DATA 1,3,1,1,1,1,1,3,1,1,1,1,3,1,1,1
                                              1390 IF STRIG(0)=0 THEN FOR T=1 TO 20:NE
 880 DATA 1,2,2,2,2,3,2,2,2,3,2,2,2,1
                                              XT T:60TO 1430
 890 DATA 1,3,1,1,3,1,3,1,3,1,1,3,1,3,1,1
                                              1400 N=STICK(0)
 900 DATA 1,2,3,2,2,1,2,2,1,2,2,1,2,1,1
                                              1410 IF N<>15 THEN RETURN
 910 DATA 1,1,1,3,1,1,1,1,2,1,2,1,1,2,1,1
                                              1420 BOTO 1390
 920 DATA 1,2,3,2,3,2,2,2,3,2,2,3,2,2,1
                                              1430 M(X1+U, Y1+V)=2:CH=0:G=17:H=0:GDSUB
 930 DATA 1,3,1,2,1,2,1,2,1,1,2,1,1,1,2,1
                                              730: RETURN
940 DATA 1,7,1,2,2,2,3,2,2,3,2,2,3,10,
                                              1435 FOR B=1 TO LEV:TI=TI+1:FX=0:FY=0:IF
                                               X1=X2(B) AND Y1=Y2(B) THEN 2060
950 DATA 1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
                                              1440 RA=INT (RND(0)+10+1) . IF RACS THEN DE
960 DATA 3,4,2,4,1,3,1,2,4,2,3,1
970 DATA 0,-1,1,0,-1,0,1,0,0,1,0,-1,0,1,
                                              1450 X3=X1-X2(B): Y3=Y1-Y2(B): MX=SGN(X3):
-1,0,1,0,-1,0,0,-1,0,1
                                              MY=SGN (Y3)
1000 IF LA=0 THEN RETURN
                                              1460 DM=M(X2(B)+MX, Y2(B)): IF DM=2 THEN 1
1010 N=STICK(0): IF STRIG(0)=0 THEN 1040
                                              500
1020 IF N<>15 THEN RETURN
                                              1470 IF DM>2 THEN DM=M(X2(B)+(MX*2), Y2(B
1030 GOTO 1010
1040 X=INT (RND(0) *12+2): Y=INT (RND(0) *12+
                                              1480 IF DM=2 THEN MX=MX*2:60T0 1500
2):R=INT(RND(0)#4+1)
                                              1490 FX=1:MX=0
1050 IF M(X,Y)=2 THEN 1060
                                              1500 DM=M(X2(B), Y2(B)+MY): IF DM=2 THEN 1
1055 GOTO 1040
                                              540
1060 GRAPHICS 6+16: SETCOLOR 0.0.0
                                              1510 IF DM>2 THEN DM=M(X2(B),Y2(B)+(MY*2
1070 FOR A=30 TO 0 STEP -2: SOUND 0, A, B, 1
5: SETCOLOR 4, A, 14: FOR T=1 TO 4: NEXT T: SE
                                              1520 IF DM=2 THEN MY=MY+2:GOTO 1540
TCOLOR 4.0.0: NEXT A: SOUND 0.0.0.0
                                              1530 FY=1:MY=0
                                              1540 IF FX+FY=2 THEN 1570
1080 GDTD 270
1100 POKE 764, 255: IF CHal THEN RETURN
                                              1550 IF FY+FY=0 THEN 1500
1105 GRAPHICS 0: SETCOLOR 2,7,0: SETCOLOR
                                              1560 M(X2(B)+MX, Y2(B)+MY)=9:M(X2(B), Y2(B
4,7,0:SETCOLOR 1,7,0:POKE 752,1:C=0
                                              ))=2:X2(B)=X2(B)+MX:Y2(B)=Y2(B)+MY
1110 FOR A=0 TO 15: MA=M(A,C):TI=TI+1
                                              1570 NEXT B: RETURN
1120 AS=MS (MA, MA): POSITION A+11, C+4: PRIN
                                              1580 RA=INT(RND(0)*2+1): IF RA=1 THEN MX=
T A$: NEXT A: A$=R$ (R.R)
                                              0:60TO 1560
1130 C=C+1: IF C<16 THEN 1110
                                              1590 MY=0: BOTD 1560
1140 SETCOLOR 1.7.8: FOR A=1 TO 40: POSITI
                                              1600 IF D1=4 THEN GOSUB 1220
ON X1+11, Y1+4: PRINT AS: FOR T=1 TO 20: NEX
                                              1605 LD=0
T T:POSITION X1+11. Y1+4:PRINT " "
                                              1610 IF D1=7 THEN GOSUB 1000
1150 FOR T=1 TO 20:TI=TI+1:NEXT T
                                              1620 IF D2=4 THEN GOSUB 1260
1160 NEXT A: GRAPHICS 6+16: SETCOLOR 0,7,0
                                              1630 IF D2=5 THEN GOSUB 1170
:SETCOLOR 4,7,0:GOTO 260
                                              1640 IF D2=8 THEN GOSUB 1390
1170 T=STRIG(0)
                                              1650 GOSUB 1330
1175 IF T=0 THEN 1200
                                              1660 GOSUB 1435
1180 N=STICK(0)
                                              1670 IF D1=10 THEN 1690
1185 IF CH=1 THEN 1190
                                              1680 RETURN
                                              1690 FOR T=80 TO 0 STEP -1: SETCOLOR 4, T,
1187 IF PEEK (764) = 37 THEN 1100
1190 IF N<>15 THEN RETURN
                                              14: SOUND 0. T. 10. 10: NEXT T
1195 GOTO 1170
                                              1700 GRAPHICS 0: POKE 752.1: SETCOLOR 2.12
1200 Q=29:G=17:S=0:H=0
                                              ,4:SETCOLOR 4,12,4:POSITION 9,12:PRINT "
1210 LA=0:M(X1+U, Y1+V)=2:GOSUB 690:RETUR
                                              WELL DONE YOU'RE OUT!"
                                              1710 FOR T=1 TO 100:NEXT T:GOTO 2000
1220 IF LD=1 THEN RETURN
                                              2000 GRAPHICS 0: POKE 752, 1: SETCOLOR 1,0,
1230 FOR T=95 TO 35 STEP -1:SOUND 0,T,10
                                              0:SETCOLOR 2,11,8:SETCOLOR 4,11,8:IF MOX
,15: COLOR 0: PLOT 0, T: DRAWTO 159. T
                                              >1 THEN 2020
1240 COLOR 1: PLOT 0, T-1: DRAWTO 159, T-1: N
                                              2010 POSITION 5,4:? "YOU ARE NOW A MONST
EXT T: SOUND 0,0,0,0
                                              ERS DINNER !"
1250 GOTO 2000
                                              2020 POSITION 7,10:? "YOU WERE IN THE MA
1260 IF LA=1 THEN RETURN
                                              ZE FOR ... "
1270 IF STRIG(0)=0 THEN 1310
                                              2030 POSITION 16,15:? ; INT(TI/8.6); " SEC
1280 N=STICK (0)
                                              'S"
1290 IF N<>15 THEN RETURN
                                              2040 POSITION 7, 20:? "PRESS BUTTON FOR A
1300 GOTO 1270
                                             NOTHER GO": IF STRIG(0) =0 THEN RUN
1310 FOR A=94 TO 82 STEP -4:COLOR 1:PLOT
                                             2050 BOTO 2040
75, A: DRAWTO 75, A-4: DRAWTO 85, A-4: DRAWTO
                                             2060 FOR T=1 TO 100: SOUND 0, T, 2, 15: POKE
 85, A: SOUND 0, A*2, 10, 15: NEXT A
                                             559, 43: SETCOLOR 4, T, 14: NEXT T: SOUND 0,0,
1320 SOUND 0,0,0,0:LD=1:RETURN
                                             0.0:MD=1:GDTD 2000
```

RY PHILIP HINTON

RIINS ON A TEXAS TI 99/4a IN 5K

Watch out — there's a snake in the grass! And this one is after all those juicy windfalls from the fruit trees in your orchard.

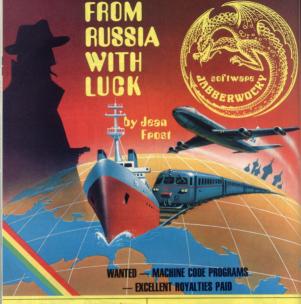
Take charge of this slippery customer as he wends his way

MUNCHER

around the rocks and trees, picking up tasty fruits on the way. There are four kinds to munch—apples, oranges, bananas and cherries. When one orchard is cleared of fruits your snake moves onto another more difficult screen. The rocks and trees in each orchard must be avoided. If the snake hits one he loses one of his ten lives. Around the edge of the orchard is a hedge which must be avoided. If the snake hits one for the young the snake hits it the game is over. How many forbidden fruits can you collect?

10 GDSUB 2170
20 TREES=20
30 NRDCX=10
40 NFRUI=10
40 NFRUI=10
50 CPLL SCREEN(4)
60 G=32
70 SC=3
80 Li=10
90 SHEET=1
100 RRDDDDDTE
110 J=0
110 J=0
110 J=0
110 J=0
110 F=1
130 FR=INT(((4) = RND) +1) =8+121
130 FR=INT(((4) = RNB) +1) =8+121
130 FREIN(((4) = RNB) +1) =8+121
130 FREIN(((4) = RNB) +1) =8+121
130 FREIN(((4) = RNB) +121
130 FREIN(((4) = RNB) +1) =8+121
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130 FREIN(((4) = RNB) +121
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130 FRE





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JABBERWOCKY

560 CALL HCHAR (23, 14, FR, NFRUI) 1110 J=0 565 REM PLACE TREES, ROCKS AND F RUITS ON THE SCREEN 570 FOR YT=1 TO TREES 580 AD=INT((18) *RND)+4 590 BD=INT((24) *RND)+6 600 CALL HCHAR (AD, BD, 96) 610 NEXT YT 1180 B=B+D 620 FOR ROC=1 TO NROCKS 630 RDCK=INT((18)*RND)+4 1200 IF Q > 32 THEN 1210 ELSE 760 640 RDCK2=INT((24)*RND)+6 1210 CALL HCHAR (A, B, CHAR) 650 CALL GCHAR (RUCK, RUCK2, RU) 660 IF R□⇔32 THEN 630 670 CALL HCHAR (RUCK - RUCK - 120) 680 NEXT ROC 690 FOR K=1 TO NERUI 700 E=INT((18)*RND)+4 710 R=INT((24)*RND)+6 720 CALL GCHAR (E,R,RFL) 730 IF RFL > 32 THEN 700 1280 NEXT SOU 760 CALL HCHAR (A.B. CHAR) 1300 FOR NUET TO 10 1310 CALL COLOR(10,16,1) 1330 NEXT NII 1340 LIV=LIV-1 1400 CALL HCHAR (23, 14, 32, NFRUI-F 900 CHAR=104 1410 CALL HCHAR(23,14,FR,NFRUI-F 910 CALL GCHAR (A, B,Q) 1430 7=2 1460 IF FRUI=NFRUI+1 THEN 1470 E LSE 760 980 CHAR=107 1465 REM GARDEN CLEARED OF FRU 1470 CALL SOUND (100, 110, 0, 220, 0, 1480 CALL SOUND (100, 440, 0, 550, 0, 1490 CALL SOUND (100,800, 0,880,0, 1060 CHAR=106 1500 CALL SOUND (400, 1000, 0, 1100, 1510 AS="CONGRATULATIONS

2

1550 AS="GARDEN "&STRS(SHEET)&" 2110 NEXT VIIII 1590 AS="BONUS "&STR\$ (SHEET*LIV* 1630 SC=SC+(SHEET*LIV*100) 1670 GDSUB 2020 1690 IF NFRUI=16 THEN 1710 1700 NFRUI=9+SHEET 1720 NRDCKS=NRDCKS+1 1730 FOR WAIT=1 TO 300 1740 NEXT MAIT 1760 CALL HCHAR (2, 16, 32, LIV+2) 1820 CALL HCHAR (A, B, CHAR) 1850 IF YU=0 THEN 1840 ELSE 760 1860 FOR SOUN=150 TO 110 STEP -1 1870 CALL SOUND (100, SOUN, 0) 1880 NEXT SOUN 1890 A\$="GAME DVER" 1930 A\$="SCORE: "&STR\$ (SC) 1970 PRINT "ANOTHER GAME?" 1990 IF K=89 THEN 20 2000 IF K=78 THEN 2010 ELSE 1980 R. 2020 FOR KL=1 TO LEN(AS) 2030 CALL HCHAR (Z, RT+KL, ASC (SEGS) 2040 NEXT KL 2055 REM RAN INTO HEDGE 2060 FDR VDLU=30 TD 0 STFP -1 2070 CALL SOUND (-250, -2, VOLU) 2080 NEXT VOLU 2370 IF S=0 THEN 2360 ELSE 2380 2090 FOR VOLU=0 TO 30 2100 CALL SOUND (-500, -2, VOLID

2120 AS="YOU WENT OUT OF THE GAR 2150 GDSUB 2020 2165 REM INSTRUCTIONS 2170 CALL CLEAR 2180 CALL SCREEN (16) 2190 FRINT " MILN CHER ALL THE": "TIME." 2220 PRINT " YOU MUST MAKE THE 2230 PRINT "BUT BEWARE, THERE ARE TREES": "IN THE GARDEN AND ROCKS ": "LYING ABOUT. NTO": "FITHER OF THESE, ANOTHER" L ALL": "TEN SNAKES HAVE BEEN USE FRUITS": "IN A GARDEN YOU ARE MO VED": "TO ANOTHER DNE. 2280 CALL CLEAR 2290 PRINT "AT THE END OF EACH G ARDEN": "YOU ARE GIVEN A BONUS WH 2310 PRINT "WATCH BUT FOR YOUR T RAIL AS": "A SNAKE IS LOST IF IT" : "COLLIDES INTO THE ITS TRAIL. 2320 PRINT "ALSO BEWARE OF THE S IDE OF": "THE GARDEN, IF YOU RUN NTO": "IT YOU HAVE LEFT THE GARDE 2330 PRINT "AND YOUR GAME IS DVE @ 2340 PRINT "ENSURE THE BLPHA LOC K KEY": "IS IN THE 'ON' POSITION. 2345 PRINT "USE THE CURSOR KEYS (E,D,X,S) ": "TO CONTROL YOUR SNAKE 2350 PRINT : "PRESS ANY KEY TO CO NTINUE' 2360 CALL KEY (0, K, S)

sinclair special

1



Inside...

Latest prices round-up... Latest software... Order form...

Introduction

One thing's certain about the Sinclain world - there's never a dull moment. Every month sees new software and new hardware, produced by Sinclair enthusiasts, or produced by

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able, we want you to have accurate information - fast. You'll find it here.

latest information on the recommended retail prices of Sinclain you may well find things cheaper (or dearer) in the shops. If they're cheaper-terrific! Snap them up Note, however, that from us the ZX81 is down to £39.95.

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Managing Director

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16Kwas £125.00 16Know £99.95 48K was £175.00 48K now £129.95

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rinter was £59.95 ZX Printer now £39.95 ZX81 was £49.95 ZX81 now £39.95



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Be the Guard and defend the randomly

Be the Guard and defend the randoming placed boxes of ammunition inside the compound – or be the Sabateur and attack the ammunition!

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Written by Macronics for a ZX81 with 16K RAM. Cassette price: £4.95.

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of BASIC with the speed of machine code.

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01671 100-711LF=89:RT=73:PI=102 148:PE=17828 1-1 TO 100:POKE 4514,VF:USR(68):NEXT VF "08888888888":PRINTTAB(16):"

10160SUB 100 PD+X+(Y*40)).0

) = UP THEN IF PEER (PD-X+(V+40)-40)=0 THEN Y=V+12=1) = UP THEN IF PEER (PD-X+(V+40)+40)=0 THEN Y=V+12=1) = UP THEN IF PEER (PD-X+(V+40)+40)=0 THEN X=X-12=1) = UP THEN IF THEN IF THEN IF THEN IF THEN X=X+12=1) = UP THEN IF THEN IF THEN IF THEN IF THEN X=X+12=1

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LAST THEN PERE A

(PO+X+(Y4=0) F 55:41 THEN 5 32 THEN IF 55:41 THEN 5 32 THEN IF TT(41 THEN 5 32 THEN IF BN(41 THEN 5 300 GOSUB 4010 300 THEN CX=5:GOTO 1180 301 THEN CX=5:GOTO 1180 301 THEN CX=5:GOTO 1180 301 THEN CX=5:GOTO 1180 (CX+ST) THEN CX=5

THEN GOSUB 4010 S. 30:POKE 4466,0:PRINT"

THEN RETURN) TO 0 STEP-1:POKE 4514, ZZ:USR(68):NEXT TO 50:POKE 4514, ZZ:USR(68):NEXT

Z=1 TO 20 4514, AZ:USR (68) "B": PRINTTAB(8): "B"; SC 12=50 TO 1/STEP -1 4514, AZ: USR(68)

AZ=1 TO 30 4514, AZ:USR(6B) RETURN (MY*400), O PD-HKE MY*400), O PD-HKE MY*4VE VI THEN MW=KY-1 VI THEN MY=KY-1 VI THEN MY=KY-1 (PO+MX*(MY*40), Z(2) (PO+MX*(MY*40), Z(2) (WX THEN BY THEN MY-Y THEN BOTO BOOO MX X THEN BY THE WY-Y THEN BOTO BOOO MX X THEN BY THE WY-Y THEN BOTO BOOO MX X THEN TE WY-Y THEN BOTO BOOO

URN -FX+(FY+40)),0:F=1 E (FD+FX+(FY+40)),0:F=1 FX+MX THEN IF FX+MX THEN F=0:F0T0 7000 FX+MX THEN IF FX+MX THEN F=0:F0T0 109 FEEK (FD+FX-1+(FY+40))=164 THEN F=0:F0T0 109 THEN IF FY=MY THEN F=0:GDTD 7000 X+(FY*40)),69

RUNS ON A SHARP MZ80K

IN 5.5K

old Fred with 10 billion volts! Fortunately for Fred his toolkit comes complete with an energy gun to ward off the sinister Sparx. The higher the number of the out-put port Fred takes his energy bytes to the greater number of points are

scored. Movement is controlled by using the keys "7" for up, "Y" for left, "I" for right and "J" for down. The gun is fired by the "CR" key.



(PD+MX+(MY+40)),10 BB (PD+MX+(MY+40)),0 1:MY=4

O MEDI INFORMATION OF THE PROPERTY OF THE PROP

PRINT-

R(71) FOR EX=-255 TO 255 STEP 8 BX=ABS(EX):PORE 4514,I:PORE 4513,BX:USR(68):NEXT (71) STATEMENT ASTALL DONE PLEASE ENTER YOUR NAME "
INT "MOST MOSE THAN 20 CHARACTERS) "
TO \$135 \text{20} THEN 9010
TO \$135 \text{20} THEN 9010

100 PARTY BO YOU NEED INSTRUCTIONS (TYPE Y OR M)DE SYSTEM BOTO SHOOT
FAR ALL THE BOTO SHOOT
FAR ALL THE BOTO SHOOT
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FOR S

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"S" THEN GOTO 3

BY STUART WIDER

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RUNS ON A ZX81

GLADIATOR



Gladiators takes you back to those bloodstained days of ancient Rome when everyone's idea of a good time was to go and watch two men hack bits off each other! These days we're much more civilised about these things. We only do it on video screens!

You can either fight it out against a computer controlled opponent or take on a friend in mortal combat.

To move Gladiator 'K' use keys Z and X. To move Gladiator 'L' use

keys N and M.

The program works as listed but suffers from the speed limitations of ZXS1
Basic. It can be speeded up slightly by moving the mass of LET statements to

the end of the program.
To do this, change line 2 to GOTO 7000 and add 7000 to all line numbers between 3 and 186. Then delete lines 3 to 186.

1 REM SET 30 2 GOTO 8000 3 LET Z=20 4 LET Y=5

9 REM FIN ALL ARRAY 10 DIM A\$ (8,6) 12 LET A\$ (1) ="

DIN A\$ (1) = "
12 LET A\$ (2) = "
14 LET A\$ (3) = "
15 LET A\$ (4) = "
16 LET A\$ (6) = "
20 LET A\$ (6) = "

8\$(8,6) 8\$(1)=

B\$(2) =" B\$(3) =" B\$(4) =" B\$(5) ="

REM MANUAL AND STREET REM NOTES THEN LET Y=1
IF Y<1 THEN LET Y=1
IF Y>19 THEN LET Y=19
IF Y=Z-5 THEN GOSUB 2000
IF Z<1 THEN LET Z=1
IF Z<2 THEN LET Z=24 GOTO REM E FOR I TECK STERM 1 TO 6 OT 10+I,Y;C\$(I); AT 10 D\$(I) NEXT I REM SEE IF HIT LET K=INT ((RND+10)+1) IF K;5 THEN LET U=U-1 PRINT AT 2.30:0 LET K=INT (IF K)5 THEN PRINT AT 2,1 IF U=A T.2,1 THEN LET U=U-1 AT 2,10:U THEN GOTO 5000 INT (RND*10)+1 5 THEN LET J=J-1 AT 2,26;J THEN GOTO 3000 1030 PRINT AT 2,26;J IF J=0 THEN GOTO 3 GOTO 1030 REM DECEMBER 2 DIES FOR I=1 TO 8 FOR I=1 7 10+I.Z; E\$(I); RT 10 SS FOR N SS FOR N SO PRINT KILLED N=1 TO 40; PLRYER 1 H ELEY EREAL H 20,2;" BATTER TO THE FOR I =1 AT 10+I.Y;F\$(I);AT 10 H\$(I) 40 20,2;" PLRYER 2 H D YOU PLEYERES H 20,2;" 5070 NEXT N 5100 GOTO SOO NEXT N GOTO 8000 FOR N=1 TO 22 PRINT AT NEXT N PRINT AT 20.0: SIGN SECURIT 3.10: 1140 SECURITY 3.10: 115 A GRA SIGN FOR SIGN SECURITY 3.10: 115 A GRA SIGN SEC CHANGE SIDES AT"; AT 14,2; "AT AN Y TIME SELECTION OF GLAD OF SELECTION OF GLAD SELE 190 PRINT HT 20,3; "PRESS ANY KE TO CONTINUE" 192 IF INKEY\$="" THEN GOTO 9192 195 GOTO 3 9192 9195 9996 9997 STOP REM SPUE POUTING SAVE "GLADIATOR" SOTO 1



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Cheques cashed and programs not delivered seems to be the

Cheques clastice and programs not deriverse seems to be disbiggest problem area in the home computer industry's reputation. The second of our Creat Software Disaster columns wrote Itself after a deluge of letters about disappointed youngsters who had waited months for a cassette which was still to arrive. We've printed a small cross section of the letters below and phoned up

printed a small cross section of the letters below and phoned up several software companies to find out why delays may occur, how long it is reasonable to wait before assuming that something has gone wrong and how to go about complaining.

LOSTA SNATCHA

One afternoon in March, having saved up all my money to splash out on a program for my Vic-20, I wrote to Imagine Software requesting a Catcha Snatcha for £5.50.

I waited for three days for it to come, the date by which their advert claimed I would have it. Living in London, I couldn't go to Liverpool to complain and I was at school whenever I might have

been able to phone. Christopher Morgan,

Chartton Place, London SW1

Eugene Evans of Imagine came back positively on this one. "As of now there are no delays. And we do have a complaints procedure for dealing with customers who are suffering from postal delays.

"Part of the problem in the past was that magazimes need copy for adverts a long time before the issues actually come out. We would book the advert at the same time we started work on the game so we could have it ready at the same time the magazine hit the streets. But to do this, meant there could not be the slightest delay in production.

"Now there are no problems in timing as we have all our latest titles in stock before we launch them. Our claim of 48 hour delivery time is definitely now in action."

On Imagine's behalf, I would like to add, Christopher, that C&VG phoned their offices at 5.45pm, so don't be afraid to phone when you come home from school.

CLUB LETDOWN

In February this year my son joined, through your magazine, the Microcomputer Software Club and, shortly afterwards, he received the newsletter advertising various cassettes.

He decided to purchase the game tape Golf, completed the form and posted it with a cheque for the correct amount. The cheque has been cashed No black marks against Quicksil va's mail-order department so will decided to ask how they keep their customers happy. Mark Tilson of Quicksilva's production department explained "We aim to turn around a cassett

"We do have our problems though and, like most software houses, we are in the hands of the tape duplicating companies and sometimes hold-ups do occur. The reason being that when stocks run down we order new copies, say 5,000 tapes, and we occasionally have to wait a long

as a month."
Legally mail-order customers
are not on secure ground. The
Office of Fair Trading spokeswoman, Lindsay Keith said: "The
biggest problem with mail order is
that people are asked to pay in
advance. The company can go
bust. They may not send off your
goods or they may send faulty

"The Advertising Standards Authority lays down 28 days for delivery of mail order goods but it helps to know as much about the company you're dealing with as possible before ordering from

"There is nothing to stop company from cashing a chequas soon as it arrives even if the

but as of late May, the tape had still not arrived.

Would you please investigate and let me know why the tape has not been

A. R. Gardiner, Bishopbriggs,

Glasgow.

John Durrant of Microcomputer Software Club replies: "We usually promise a 24 hour turn-around on receiving an order. The club keeps an average 50-100 tapes of each title in stock and this is put up to 3-500 on the biggest sellers.

"Occasionally when a manufacturer is having production problems, club members can wait as long as a week. But this is rare and the reason for using the club rather than going direct to the manufacturers is the fast reliable turn-around.

"Our policy on complaints of nondelivery, or the occasional bad loader, is to send it out again and ask the purchaser to send one tape back if two arrive."

He added that Mr Gardiner need only write to the club or phone membership secretary Mrs King on Oxford 730275 and a new tape will be despatched.

ANGRY ADVENTURER

For seven months now I have been waiting for five games from C.P.S. Limited which were advertised as follows: The Fourth Kind, The Doomed City Wizard of Shan, The Ghost of Radun and Convoy.

I sent for these on November 9th 1982

and included a cheque for £47.50 and after repeated phone calls and numerous letters, I still have not received the games, or any money back. I understand that C.P.S. now call themselves Chameleon Computer Games.

D. K. Ditchburn, Nunthorpe,

Middlesbrough

Let us put you right on one point Mr Ditchburn, Chameleon Computer Games are not the same company as C.P.S. Chameleon did have an agreement to market three C.P.S. games, but have since withdrawn that agreement and impounded royalties to C.P.S.

Great Software Disasters is our watchdog on the industry. If there's anything which has angered you, software, hardware or computer company, please write in and tell us and we'll look into it and publish your views.

We only insist that companies

must be given a chance to answer their critics before we publish. Write to: Great Software Disasters, Computer & Video Games, Durrant House, Herbal Hill, London EC1R 5JB. PAGE

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BALLOONAC

100 DIM A\$(640),B\$(10),C(7),P\$(10),CV(7),H\$(10),N\$(10),S(\$(10),SC(7)]
110 RT=64:ART-8:PDKE 106,A:GRAPHICS 18

110 RT=64:A=RT-8:POKE 106,A:GRAPHICS 18 114 POKE 704,56:POKE 708,234:POKE 710,15 2 120 POKE 54279,A:PMB=256*A:POKE 559,46:P

OKE 53277,3:CHB=PMB+1024 130 VTAB=PEEK(134)+PEEK(135)*256

130 VTAB=PEEK(134)+PEEK(135)*256 140 ATAB=PEEK(140)+PEEK(141)*256 150 DEFS=PMR+384-ATAB:HI=INT(OFFS/256):L

150 OFFS=PMB+384-ATAB:HI=INI (UFFS 0=OFFS-HI*256 160 POKE VTAB+2,LO:POKE VTAB+3,HI

160 POKE VTAB+2,LO:POKE VTAB+3,H1 170 FOR J=1 TO 10:READ A:SK\$(J,J)=CHR\$(A):NEXT J

171 DATA 0,62,42,62,20,28,65,62,65,0 180 A\$(1)="":A\$(640)="":A\$(2)=A\$

185 FOR J=225 TO 232:READ A:A\$(J,J)=CHR\$
(A):NEXT J
186 DATA 8,28,28,73,62,28,20,20

186 DATA 8,28,28,73,62,28,20,20 188 COLDUR=1010:GOSUB 1000:RESTORE 265

210 POSITION 6,3:? #6;"W a i T":POSITION 5,11:? #6;"BaLlOoNaCY" 250 FOR J=0 TO 511:POKE CHB+J,PEEK(57344 +J):NEXT J:POKE 756,RT-4

260 FOR J=24 TO 39:READ A:POKE CHB+J,A:N

265 DATA 223,223,223,0,251,251,251,0 266 DATA 28,62,62,28,28,28,8,0

Can you become Top of by booting the balloon the Poppers? No, not ack into the sky with a well aimed kick. As vet another bunch of long as the balloon is pretty musicians. This below head height and Popper aims to become number one in the the little man is near enough then he'll be balloon bursting charts! And all you able to save a life.

Some balloons are need is a silly hat with a sharp pointed spike tricky and turn into skull and crossbones on top, What, you before reaching the haven't got one! Oh well, never mind the ground - these must Atari mad hatter will he avoided at all costs. supply you with one as To get beyond the first soon as you've keved screen you must burst 12 balloons. The in this game. The idea is to second tests you with manoeuvre your little 14 balloons, the third

man with the spiked 16 and so on. hat around at the The balloons drop bottom of the screen. faster on each placing him under subsequent screen and balloons which drift more of them drop diagonally instead of down from the sky above him. If you miss vertically. You score for and a balloon hits the each balloon popped ground you lose one of and a bonus is given when you complete a your three lives. But screen. You can freeze you can save yourself the action at any time by pressing any key.

268 RESTORE 186:FOR J=40 TO 47:READ A:PO

KE CHB+J,A:NEX! J 270 RESTORE 266:FOR J=2 TO 9:READ A:B\$(J,J)=CHR\$(A):NEXT J:B\$(1,1)=CHR\$(0) 275 FOR J=1 TO 10:READ A:P\$(J,J)=CHR\$(A):NEXT J

276 DATA 0,86,169,130,65,1,130,92,32,0
280 FOR J=0 TO 7:READ A:SC(J)=A:NEXT J
281 DATA 12,10,8,6,6,8,10,12
290 POKE 1791,0:DLIST=PEEK(560)+256*PEEK

(561):PDKE DLIST+6,135:RESTORE 1400:J=15

291 READ A: IF A<>-1 THEN POKE J,A:J=J+1: BOTO 291 292 POKE 512,0:POKE 513,6:POKE 54286,192

293 SC=0:DL=8:LV=1:B=10:HB=B:LEVEL=0:LIV. ES=3:POKE 764,255:H4=B4:T=100 295 COLOR 35:PLOT 0,11:DRAWTO 19,11:COLO

295 COLOR 35:PLOT 0,11:DRAWTO 19,11:COLO R 5:PLOT 1,11:PLOT 2,11:PLOT 3,11:POSITI ON 9,11:? #6;LEVEL+1 300 FOR J=30 TO 120:POKE 53248.J:SOUND 0

300 FOR J=30 TO 120:PDNE 53248, J:SUUND 0, 0, 0 100+T, B, 15:T=T:NEXT J:SUUND 0, 0, 0 305 POKE 77,0:PDNE 1790, 120:PDNE 1791, I: DL=DL-T:LV=(LV=0):HB=HB+2:B=HB:IF B>30 T HEN B=30

HEN B=30 310 RESTORE 1500+100*LV:GDSUB 1500+100*L V:FOR J=0 TO 7:READ A:C(J)=A:NEXT J:IF D L:0 THEN DL=0 320 FOR J=1 TO 5:SOUND 0,82.10.10:FOR K=

1 TO 10:NEXT K:SOUND 0,0,0,0:FOR K=1 TO

RUNS ON AN ATARI 400/800 IN 16K By Simon Goodwin

Program Notes: Line 180. The string assignments are to "CONTROL COMMA" (the heart shape). The printer prints this as a space.

Line 210. Any mixture of inverse, upper and lower case will do in the title, just to make it attractive.

Line 433. As line 180. Line 435. As line 180. Line 550. The word "STAR" is in inverse. Line 576. As line 180. To make it easier to kick a balloon, alter line 400 so that the tests on "P" are greater than 4. To make it easier to make it easier to to make it easier to "To make it easier to proper 373 so that the tests on "P" are greater than 2. Hints on Play:
After popping a ballon,
immediately return to
the centre of the
screen. This is critical
on the higher levels of
play.
It is safe to pass
through the skull and

crossbones once it has missed your head; but don't kick it. Don't panic trying to get exactly lined up. It is offen easier to accept that you are off centre for the baloon, and wait and kick it up again, than to keep pulling on the stick trying to move just that little bit.

20. NEXT K: NEXT J: IF DL<0 THEN DL=0 330 A=INT(RND(0) *B): IF C(A) =-1 THEN 330 335 IF PEEK (764) <>255 THEN GOSUB 610 40 X=0:IF RND(0)*12<LEVEL THEN X=RND(0)
2:IF RND(0)>0.25 THEN X=-X

350 IF (A=0 AND X<0) DR (A=7 AND X>0) TH 352 SKP=336-LEVEL/2: B\$=H\$: NC=CV(A): N\$=H\$

: IF RND(0)<0.15 THEN NC=14:N\$=SK\$ 355 IF SKP<332 THEN SKP=332

360 D=64+16+0+POKE 705, CV(A) : POKE 53249. D: V=C(A) *8+272: COLOR 0: PLOT · A*2+2, C(A) 365 D=D+X:POKE 53249, D:A\$(V,V+9)=B\$:V=V+ 1: IF STRIG(0)=0 THEN BOOT=1 366 IF V(SKP THEN FOR K=1 TO DL:NEXT K:G

367 B\$=N\$:POKE 705.NC 370 D=D+X:POKE 53249.D:A\$(V.V+9)=B\$:V=V+ 1: IF STRIG(0)=0 THEN BOOT=1

371 TE VC346 THEN FOR K=1 TO DL:NEXT K:G 372 P=PEEK(1790): IF P>D-2 AND P<D+2 THEN

GOSUB 900:GOTO 380 374 D=D+X:PDKE 53249.D:A\$(V.V+9)=B\$:V=V+

1: IF STRIG(0)=0 AND BOOT=0 THEN 400 375 IF V<354 THEN FOR K=1 TO DL:NEXT K:G DTD 374

376 DR=1 380 C(A)=C(A)-1:B=B-1:IF DR=1 THEN DR=0:

83 A\$ (V, V+B) ="": IF B>0 THEN FOR J=1 TO 150:NEXT J:BOOT=0:GOTO 330

390 POKE 1791,0:FOR J=0 TO LEVEL:POSITIO N 8,8:? #6; "bonus": SOUND 0,150,10,15:SC= SC+10*(LEVEL+1)*LIVES 392 POSITION 14,11:? #6;SC:FOR K=1 TO 10

0: NEXT K: POSITION 8.8:? #6:" 395 SOUND 0,0,0,0:FOR K=1 TO 100:NEXT K: NEXT J: IF SC>4999 AND EX=0 THEN GOSUB 60

396 LEVEL=LEVEL+1:COLOR 0:FOR J=0 TO 5:P LOT 0.J:DRAWTO 19.J:NEXT J:GOSUB 1000:PO SITION 9,11:? #6; LEVEL+1: GOTO 300

400 BOOT=1:P=PEEK(1790):IF P<D-4 OR P>D+ 4 THEN GOTO 374 405 FOR K=12 TO 15: SOUND 1,100,10,K:NEXT

K:FOR K=15 TO 0 STEP -5:SOUND 1,100,10, K: NEXT K

407 IF NC<>14 THEN 410 408 NC=0:GOTO 376

410 V=V-2: X=ABS(P-D)/12: IF D>125 THEN X=

412 GOTO 500

420 IF NC=14 THEN 450

421 COLOR 35: PLOT LIVES, 11 425 POKE 1791,0:FOR J=15 TO 0 STEP -0.75 :FOR K=2 TO 10 STEP 2:POKE 704, K*J:SOUND 0.J*K.2.J:NEXT K:NEXT J

430 LIVES=LIVES-1:POKE 704,56:IF LIVES=0 THEN B=0: GOTO 550

435 A\$(V.V+8)="":FOR J=30 TO 120:POKE 53 248, J: SOUND 0, 100+T, B, 15: T=-T: NEXT J: SOU ND 0,0,0,0

440 POKE 1790, 120: POKE 1791, 1: RETURN 450 FOR J=8 TO 15:FOR K=15 TO 1 STEP -3:

SOUND 0.J*K.14.15:POKE 705,J*K:NEXT K:NE XT J:SOUND 0,0,0,0:RETURN 500 D=D+X:PDKE 53249, D:A\$(V, V+9)=B\$:V=V-

1: IF V>312 THEN FOR K=1 TO DL: NEXT K: GOT

510 V=V+1:B00T=0:G0T0 370

550 RESTORE 590: POSITION 3,6:? #6; "PRESS START TO": POSITION 5,7:? #6; "play again

570 IF PEEK(53279)<>6 THEN 580 575 COLOR 0:PLOT 3,6:DRAWTD

16.6: PLOT 5, 7: DRAWTO 14,7:FOR J=0 TO 5: PLOT 0. J: DRAW TO 19. J: NEXT J

576 PDKE 53249,0: A\$ (V, V+B) ="" :B\$=H\$:COLOUR=1010:GOSUB 1000:GOTO 293 580 READ A: IF A=-1 THEN RESTORE 590: GOTO

580 585 SOUND 0, A, 10, 15: FOR J=1 TO 22: NEXT J :READ A: SOUND 0, A. 10, 10: FOR J=1 TO 32: NE XT J:60TD 570

590 DATA 243, 121, 193, 121, 162, 121, 144, 121 , 136, 121, 144, 121, 162, 121, 193, 121

591 DATA 243, 121, 193, 121, 162, 121, 144, 121 ,136,121,144,121,162,121,193,121 592 DATA 182,91,144,91,121,91,108,91,102

,91,108,91,121,91,144,91 593 DATA 243, 121, 193, 121, 162, 121, 144, 121

, 136, 121, 144, 121, 162, 121, 193, 121 594 DATA 162,81,128,81,108,81,96,81,91,8 1,96,81,108,81,128,81 595 DATA 182,91,144,91,121,91,108,91,102

,91,108,91,121,91,144,91,-1 600 LIVES=LIVES+1:EX=1:COLOR 5:PLOT LIVE S.11:RETURN

610 POKE 1791,0:FOR J=1 TO 50:NEXT J:POK E 764,255 620 IF PEEK (764) <> 255 THEN POKE 1791,1:P OKE 764,255: RETURN

630 FOR J=1 TO 50:NEXT J:GOTO 620 900 IF NC=14 THEN 930

910 A\$(V,V+9)=P\$:SOUND 0,5,8,15:FOR K=1 TO 5: NEXT K: SOUND 0,0,0,0: SC=SC+SC(A) * (L FVEL+1)

920 POSITION 14,11:7 #6;SC:RETURN 930 NC=0:POP :GOTO 376 1000 RESTORE COLOUR: FOR J=0 TO 3: READ A:

CV(J)=A:NEXT J:COLDUR=COLDUR+10:IF COLOU R=1070 THEN COLOUR=1010 1004 CV(4)=CV(0):CV(5)=CV(3):CV(6)=CV(1)

1005 PDKE 708, CV(2): PDKE 709, CV(1): PDKE

710, CV(3): PDKE 711, CV(0): RETURN 1010 DATA 70,186,234,152

1020 DATA 166,26,72,102 1030 DATA 202,26,8,122

1040 DATA 182,246,218,86 1050 DATA 28, 184, 120, 246

1060 DATA 24,54,252,168 1400 DATA 72, 173, 255, 6, 240, 25, 173, 0, 211, 105, 105, 106, 176, 5, 206, 254, 6, 144, 6, 106, 17

6,3,238,254,6,173,254,6,141,0,208 1402 DATA 104,64,-1

1500 FOR J=0 TD 5

1510 COLOR 4: PLOT 4, J 1520 COLOR 36:PLOT 6,J

1530 COLOR 164: PLDT 8,J 1540 COLOR 132: PLOT 10, J

1550 COLOR 164: PLOT 12, J 1560 COLOR 4:PLOT 14, J:NEXT J:RETURN

1570 RETURN

1599 DATA -1,5,5,5,5,5,5,-1 1600 FOR J=0 TO 4

1605 COLOR 132: PLOT 2, J 1610 COLOR 4: PLOT 4, J 1620 COLOR 36: PLOT 6.J

1630 COLOR 164: PLOT 8, J 1640 COLOR 132: PLOT 10, J

1650 COLOR 164:PLOT 12,J 1660 COLOR 4: PLOT 14, J

1670 COLOR 36: PLOT 16, J: NEXT J: RETURN 1699 DATA 4,4,4,4,4,4,4,4

```
21 E-0 || B-2 B-2 | | E-0 E-0 B-
            5 PRINT
                                                    34 | # S P W S - 34 # S # S | # S | # S | # S | # S | # S | # E S -
            6 PRINTS
                POINTS
                                                    HI TANK P.
         9 PRINT: PRINT
                                                                  MS THE SEQUEL
                                              201
               PRINTE
       11 PRINT
12 FORJ#1703:FORI#870255:POKE36879, I:NEXTI, J
       14 FORTHBTOS11: POKE7168+1, PEEK (32768+1): NEXT
     14 FOREMETOS11:POREMIGNET FOREMISSION OF THE PROPERTY OF THE P
    15 FOREIGNETS-180 FOREI-FARZIOTSBS-SERGO-FOREI.G-NEDT
FOREIGNESS-230-230-8-127-127-127-8-8-8-8-8-28-8-3-68-111.196-111.68-2-8-182-
  68,246
[7] BBTR35,246,68,192,8,68,118,255,175,7,175,254,124-68,118,255,245,224,245,127,6
 19 PRINT" TPLEASE LOAD "NIBBLERS THO" NEW
    a POKF36869, 255: 000UB47: H=36864: V=36865: T=36866: U=36867: F=36877: G=36879: G0T07
         FOR I = 1 TODE : NEXT : RETURN
        cnp 1=(10)e: REXT-RETORN
cnp 1=(10)e: REXT-RET
  3 GOSUB1:NEXTJ:POKEH, 12:POKEV, 38:RETURN
  4 PRINTCHR$(147): POKEG, 236: POKEG-1, 15: FOR I=8T022: GOSUB6: NEXT
        FORT #22TORSTEP-1: GOSLIBG: NEXT: POKEF, 8: RETURN
         POKEH, 12+I: POKEV, 38+I: POKET, 158-I: POKEU, 174-I#2: POKEF, 238+I: RETURN
        PM=1:0K=1:NO=0:DE=108:SC=0:LE=1:B=34:INC=10:W=203:M=40:ER=33:C=30720
    R GOSUB4: GOSUB37
        X=INT(RND(0)#42)+1:IFX)21THENX=X-21:D=-1:A=7781:N=37:GOTD11
    10 De1:007680:N=38
            D=1:H=1000
            POKENP.N: POKENP+C. 8: GOSLIR1: GOTO16
            DOLEND 32: NPHNP+D: TEPEEK (NP) HATHENDERS: DOSLIR2: DE+188: GOTD42
            IFFEEK(NP)+BRTHENPOKENP, 32: RM=OK: POKEB46, 222: GOTO9
              1FPEEK(N)=8ANDAM=0KTHENPP=7686:P=35:E=7679:0S=-1:AM=N0:90T019
              TEPERK(N) *399ND8M=0KTHENPP=7695: P=36: E*7782: 0S*1: RM*N0: 90T019
            IFPP#ETHEN13
    28 POKEPP, P:POKEPP+C, 1
              IFPEEK (W) = 64THEN24
              TEPEEK (PP+22) = NTHENBP = PP+22 : 00T029
            POKEBP, B: IFPEEK (BP+22) #NTHEN25
              IFRPORTATTHENPOKERP, 32: POKEPP, 32: GOTO13
              POKESP. 32: SP=SP+22: G0T026
            POKEBP+22, 39: POKEBP+22+C, 2: POKEBP, 32: POKEPP, 32: GOSUB1: POKEBP+22, 32
              SC=SC+INC: IFSC>HITHENHI=SC
            SUPSUP INC. IPSCHITHENHIPSG

IFSC: 18889ANDLE=3THENLE=4: DE=25: G05UB39: G0T035

IFSC: 18889ANDLE=2THENLE=3: G05UB39: INC=58: DE=58: G0T035

IFSC: 1888ANDLE=1THENLE=2: G05UB39: INC=75: INC=28
            RMUCK: GOTOS
              GOSUB4: IFLE=1THENRS="MI.!! TK (MI!!! ": GOTO48
            GOSUB4: IFLE=2THENRS=" MITM((MI) ":GOTO48
GOSUB4: IFLE=3THENRS=" MITM((MI) ":GOTO48
     40 PRINT"2" : PRINT"1000000000)))
              FORT = 1 TO21 : PRINTTRB(7) R$: NEXT : FORI = 8164T08185 : POKEI - 41 : POKEI + C. 5 : NEXT : RETURN
    42 FORI=8T09:GET2#:NEXT:PRINT"THOODONNOUR SCORE WAS ";SC:PRINT"THE HIGHEST IS ";
    42 DOTNT YMENOTHER DAME 2
    44 GETG#: IFG#="THEN44
            IFG#="Y"THEN7
    46 ENT
```

48 DATRIGO, 15, 141, 14, 144, 128, 169, 82, 141, 28, 3, 169, 3, 141, 21, 3, 89, 96, 18, 15, 16, 64, 16

49 DRTR162, 222, 173, 78, 3, 201, 10, 176, 9, 238, 78, 3, 238, 18, 144, 76, 116, 3, 148, 18, 144, 236

50 DATR288, 6, 140, 78, 3, 142, 10, 144, 173, 79, 3, 201, 25, 176, 9, 238, 79, 3, 238, 11, 144, 76, 14

52 DRTR286, 12, 144, 76, 176, 3, 148, 12, 144, 236, 88, 3, 288, 6, 148, 88, 3, 142, 12, 144, 173, 81,

53 DRTR64, 176, 28, 238, 81, 3, 173, 81, 3, 281, 22, 288, 7, 169, 176, 141, 13, 144, 248, 25, 281, 43 54 DRTR21, 169, 168, 141, 13, 144, 248, 14, 148, 13, 144, 236, 81, 3, 288, 6, 148, 81, 3, 142, 13, 14 55 DATR191, 234, 169, 0, 141, 14, 144, 120, 169, 191, 141, 20, 3, 169, 234, 141, 21, 3

DATR140, 11, 144, 236, 79, 3, 208, 6, 140, 79, 3, 142, 11, 144, 173, 80, 3, 201, 16, 176, 9, 238, 8

S PRINT" TROOPS NO TEN TO THE STATE OF THE S

2 PRINT - SE

Those dastardly interplanetary building biters the Nibblers, are at it again! This time they have journeyed far out into the vastness of space, to the planet Pippo just left a bit from the Cleethorpes Nebulal Here they have discovered the miraculous Towers of Twonko, one of the nine wonders of the universe, rivalling the Scones of Craddock, and even the awesome Grimace of

Blackburn! For those of you who have never heard the tale of the creator of the towers, one Twonko Higginbottom, here is

his story . . . Twonko Higginbottom was a freak. His parents were quite normal, all three of them Their faces constantly wore scowls and hangdog expressions. A picture of perfect misery. But poor Twonko was born smiling, For the first time in the history of Pippo a Pippolian had smiled!

There was only one law on Pippo, one which everyone has to conform to - and that was "Thou shall not be nice!" So poor Twonko was banished to the land of the Gruntox. where Grooses sneer and Ratlinas arouch.

Twonko was really sad about all this. He sat beneath a tree and started to laugh. He could not cry. He chuckled and chortled, sniggered and snickered so loudly that he disturbed a native of these miserable lands, "What's all this row?" shouted an angry voice from above Twonko's head. "It's me, Twonko Higginbottom," chuckled Twonko, "Go away! Get lost! Scram! Hop it!" said the anary voice, "go away you beaming buffoon!" The voice belonged to none other than Ralph the last of the Dithering Pigmies. "No, I'm not going!" smiled Twonko. And then it happened. Ralph the Dithering Pigmy reached up into the branches of the tree, plucked a fruit, and hurled it down.

The rest, as they say, is history. The fruit was a lemon. The lemon tasted sour and nasty. Twonko pulled the most miserable face ever seen on Pippo. The Pipponians saw his

78.3

3.281

FORT #828TO1819: READO: POKET. O: NEXT





MODIFICATIONS FOR MI-BOX OR ETHS ITEM OR E EPIDEMIC W+V(M))=OTHEN170 PTHENMUSIC"AO_A":0=Q-1:GOTO170 SO - MONTH THE TRANSPORT - MOUNT - 1 MONTH - 1

06-0 4+8):IF(PEEK(B)(>0)+(B=W)THEN55K 0"A":POKEB,P:O=O+1:NEXTI:RETURN

or Stanley will have to have....*:FORI=1T0700:NEXTI PENICILLIN*:FORI=1T0500:NEXTI

Poor Stanley is about to catch a disease and only you can cure him! You are an antibody floating merrily around in Stanley's bloodstream. Suddenly your peaceful existence is shattered by a bunch of nasty germs! You must kill the germs before they manage to spread through Stanley's body and reach epidemic proportions.

There are three skill levels to choose from. The higher the level the nastier the disease, and the germs multiply faster! Your score is based on the time taken to wipe out the disease. If the germs get out of control you've missed your chance to save Stanley — who has to quickly get a penicillin jab! The antibody can be moved horizontally and vertically around Stanley's body.

MODIFICATIONS FOR MZ-80A



80K A

Explanation of PEEKS & POKES POKE53258 to POKE54247 = video RAM.

POKE4466, X prints X lines down from the top of the

POKE4465, X prints X columns across from the left of the scroon.

POKE10167,1 removes the PEEK protect in SP-5025 basic to allow - PEEK(17828) which returns the ASC value of any key held down (NOT required on MZ-80A).

Main variables D = skill level (1-3). M\$ = antibody movement key. M = ASC code of movement key.

V(M) = increment of antibody movement. W = current antibody position.

B = germ position. Q = number of germs. OKE53781,119:POKE53661,0:POKE53781,0:NEXTH

1):NEXTI 1,26,39,24,40,3,41

READU: POKES+U, Y: MUSIC"_AOA"A": POKES+U, 74: NEXTH

Stanley is about to catch a disease" it is up to you, the Antibody ("; The same of the year before they recht the same of the year before they recht they recht



Can you grab the treasure filled jars hidden in the attic of the haunted house before a ghastly ghost grabs you?

You control a catburlar out to remove the jars from their hiding place at the top of the house with many floors. You must find your way up a maze of ladders to the attic avoiding the ghost which will chase you single-mindedly throughout your mission. You can

and luring the phantom crime preventor into it - but the snares only last a few seconds and the ahost will soon be

back on your trail. Once you reach the jars you must carry them - one by one back to your van parked outside the

house. You'll find a hammer on your travels through the house this can be picked up and used to deal with the skeleton you'll find in the attic. If you run

underneath it holding the hammer you'll score bonus points.

The ghost can render the hammer useless by rushing up to it and turning it red. So trap the ghost before it hits the hammer. When all the jars are in your van the next screen is displayed - and you start all over again, but with less time to beat the ghost!

You get three lives to start with and these can be lost if you get caught by the ghost.

Variables:

a.b: co-ordinates of

c,d: co-ordinates of ghost.

s: score. hs: high score.

h\$: high-scorers initials i: number of jars left.

\$: jar string (visual indication of jars left). t: time left. t\$: visual indication of

time left. m\$: visual indication of lives left.

u,q,h: general purpose flags.

HAUNTED HOUSE

REM & A.J.MURGATROYD 1983 4 CLEAR 34999: LET hs ="AJM": PRINT AT 10,5; PLEASE WAIT A MOMENT":

5 IF STTR (a+1,b) =6 THEN PRIN a+1,b; RETURN PRINT OVER 1; INK 2; PAPER 12,27; INK 7; ": PRINT HT 2, G": LET h=1 4 LET b=b+(INKEY\$="P" AND b(= AND ATTR (a,b+1)()6)-(INKEY\$= AND b>=2 AND ATTR (a,b-1)()6 55 PRINT OVER 1; AT a, b; INK 9;

56 IF INKEY\$="Z" THEN GO SUB 5 57 PRINT AT 0,10-LEN STR\$ S; I 6; s LET t=t-.015: IF t (=0 THEN LET (=t-.015: 1F (=0 UB 000 PRINT AT 21,6; INK 6; PRINT AT (,6; DUER 1; PRINT AT (,6; DUER 1; SUB 60 P INK 2 TR (c+1,d)=4 T POKE 35025,28: 00: PRINT AT C T 1;"N": POKE 63 IF ATTR (C+1,d)=4 TH 35006,5: POKE 35025,28: ZE USR 35000: PRINT AT C+ K 5; BRIGHT 1:"N": POKE 3: RANDOMIZE USR 35000: PR C+1,d; INK 6,"F": LET C= HIZE: LET d=(RND±10)+1: 25,28: MANUAL IN POKE 35025,29 2008: PRINT AT TOTAL RANDO

LET 5 = 5 64 LET d=d+(04 LET d=d+(05 LET c=c-(05 LET c=c-(0) (>6 AND ATT d=d+(d (=b AND ATTR (c,d 1,d) (80 IF 3=4 AND 5=26 AND 3=0 THE LET J=J-1: LET 9=1: PRINT AT 4 80 IN-T/14 TO J); ": BEEP . 85 IF 3=19 AND 5=3

90 IF a=INT c 60 T0 800 100 G0 T0 50 200 LET S=S+INT (1*50) 210 PRINT AT 2,6;" ";AT c,6;" 215 PRINT AT 20,1; BRIGHT 1; I

220 POKE 35006,100: RANDOMIZE U 35000 LET a=19: LET b=3: LET c=4: d=26: LET h=h+1: LET j=3 LET t=20-h: IF t<=10 THEN L 240 LET LET 250 0 LET 260 PRINT DUER 1; AT

PRINT OUER 1; AT c,d; "C" PRINT AT 4,28; j\$(TO j) PRINT AT 20,1; FLASH 0; "

298 GO TO 51 808 PRINT ST. 3, b; OVER 1; "S"; ST 808 PRINT ST. 21, 27; " 501 PRINT ST. 21, 27; " 810 FOR n=18 TO 2 STEP -2: BEEP 114: PRUSE 1; MEXT N PAUSE 1: N PAUSE 1: N PAUSE 7: BEE BEEP .075 815n PAUSE BEEP ,075,

NT AT a, b; " " ===-1: IF a <=0 THEN GO 820 PRINT AT 831 LET BEB-831 LE: 0 900 840 PRINT AT 21,28; INK 4;#\$(T LET a=19: LET b=3: LET d=26: LET g=0: PRINT AT (TO) LET a=19: 4.2 AT c,d; OVER 1; "C" ; j\$(

890 GD TD 51 IF s)=hs THEN LET hs=s: PF T 5,0; INK 7; PAPER 2; "NEU SCORE !! ENTER INITIALS" IF s=hs THEN FORTIALS TO EP S: BEEP 1,n: NEXT N IF s=hs THEN THOUT 00 IF s = hs AT 5,0; INK H SCORE !! E 01 IF s = hs T IGH SCI TO 5 902

902 IF S = hS THEN INP 902 IF S = hS THEN INP 903 PRINT AT 21,28; 931 PRINT AT 21,28; 931 PRINT AT 21,27; 11,0; INK 6; PAPER AT 21,28;"": PRINT A 6; PAPER 1; FLASH 1; GAME OVER 932 PRINT AT 15,0; INK 0; PAPER 5; ANOTHER GAME

933 IF INKEY\$="9" THEN RESTORE 9927: GO SUB 9900: GO SUB 9920: 9070 51 THEN RESTORE INKEY \$="D" THEN PRINT US

0 940 GO REM SOUND REM VARIABLES REM GRAPHICS REM INFO REM SCREEN REM THE GAME 60000 SUB 1000 9900: 0900. SUB 9700: 1040

to Haunte 15 9710 LET is=" Detcome 710 LET is=" Uelcome to Hall House "" You must travel House " You must travel House " the chief travel aro t the jars chimney p colle back to another The s which are you m ot. en collect ther jar. van, the spoots you wi Ghost Skeleton

ll find are .. The ghost can be by laying a snare skeleton by collect hammer and running disposed of by nd the ske ing the ham underneath."
9715 LET is=is+" hammer

(D) UP (A (D) Left (P (Z) Lay a snar Down Right HAUNTED PRINT " HOUSE 9718 PRINT "

9719 PRINT PAPER 2; INK 6; BR T 1; 0 1983 A.J.Murgatroyd BRIGH T 1; 9720 FOR n=1 TO LEN i\$: BEEP .00 5,5: PRINT i\$(n); NEXT n 9725 POKE 35004,255: POKE 35006,

HAUNTED HOUSE CONTINUED



Please enter the following score in your Arcade Arena Competition.

I scored on the following game:

RALLOONACY

SLIPER NIRRLERS HAUNTED HOUSE

THE SCORE WAS WITNESSED BY:

WITNESS' SIGNATURE:

MY NAME IS.

EPIDEMIC

ADDRESS:TEL:

0;x,y: NEXT n 9935 DATA 0,8,-18,0,0,-4 9937 PLOT 246,154: FOR n=1 TO 7:

READ X, W: DRAW INK 5; X, Y: NEXT 9939 DATA 0,3,2,0,-5,10,-4,0,-5, -10,2,0,0,-3 9940 PRINT AT 18,1; INK 2;"IJ";A

SOLE PRINT OF LEAST INK S. "IJ".

DOLL PRINT OF LEAST INK S. "IJ". 9953 PRINT AT 3,0; OUER 1; INK 6

9954 PRINT AT 4,26; OUER 1; INK 2;"C" 9955 PRINT AT 0,30-LEN STR\$ hS; TNK 7:hS 9950 PRINT AT 3,15; INK 6; PAPER 9950 PRINT ; INK 6;AT 18,6;" ";A 5970 PRINT ; INK 6;AT 18,6;" ";A 1 18,8; INK 6;"

985 DEF FN a(n)=(CODE a\$(n)-45 990 DEF FN a(n)=(CODE a\$(n)-45 0 AND CODE a\$(n) (58)+(CODE a\$(n)-5 0 AND CODE a\$(n) (54) 1991 LET a\$="F3110D0260A3A485C1 1F1F0EFEEE10ED794310FE2520F41C1 F1F1F0E, 1 520E8FBEC9 = 1 TO LEN a\$ STEP 2 9992 FOR j=1 TO LEN a\$ STEP 2 9993 POKE 35000+j/2,16*FN a(j)+F N a(j+1): NEXT j

9994 RETURN 9995 REM A B C D E F G H I J K 9996 REM A B C D E F G H I J K 9997 REM 9998 REM L M N



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THE

PILINDERING

Welcome back to the Galaxy of the Seven Empires where space tribes strive, struggle and connive to make an honest megahuck

Fadis

Tuber

Unon

Yunnd

Some 3,400 of you took part in Lizza the first turn of our second Mupip Seventh Empire run and once again the galaxy is a hothed of sneaky attacks, double dealing and hack-stahhing River

Our top space commander for the first turn was D. Bell of Simonside Terrace, Heaton, Newcastle-upon-Tyne, who was the schemer behind many a daring act of piracy on the Gateway routes, on his way to 2.690.

The other top scorers in the first turn were:-A. Conner of Woodmill Lane.

Ritterne Park, Southampton with 2430-P Russell West View Cottage. Mainstreet, Cotebach with 2138; J. Briscoe, Upper West Drive.

Ferring in Sussex with 1984: Bisset. High Street. Laurencekirk. Scotland with 1939:

A. Makepeace, Thirlestane Crescent Northamnton with 1859: C. Bergin, Austin Road, Hunstanton Norfolk with 1783:

M. Fiddlay, Queens Road, Aberdeen with 1753: M. Frary, Toftwood, Dareham with 1702:

N. Shawcross, Kearsley Close, Kirkdale, Liverpool with 1691. We're currently looking out some software cassettes for Mr Bell. More on offer next month.

. 760 ETTERETOR 1000 THE CATEWAY BOILTE TARLE

You're certainly improving in sending in Seventh Empire orders. Very few fleets were lost in space on this first turn of the second run. But just in case, check

through your orders carefully to ensure that any stray fleets are picked up before the second

All orders for that turn must be with us by July 22nd. First prize for the top scorer is three software cassettes for his or her microcomputer but remember a games centre goes to the highest scorer over the first six turns. This turn the scoring was spread out as follows: 500+ 157

players: 400-499 25 players: 300-399 23 players; 200-299 44 players: 100-199 55 players: 0-99 505 players; Under 0 1664 players.

To work out where you came in this batch of scorers, study the galactic map on the opposite page and for Gateway Jumps the table above gives the Cargo profits in black on white and the

Plunder profits in white on black. This month the Imperial Ships should be moved by the following players:- Dead, R. Harris of Worthing: Amethyst, S. Reid of Edmonton: Water, R. Harding of Prestwich: D'Taan's, B. Dackombe of Hampstead: Sun. A Canaldi of Tynemouth and Blood-

line by D. Bell. No takers for the

If you're new to the Seventh

Empire then don't turn over the

many of the empire's equations

is the Trade Index of any given star. The brightly coloured

Galactic Map opposite, shows

two different figures under each

The left-hand finures refer to the number of players' fleets

visiting any particular star sys-

tem, while the right-hand figure

refers to the Trade Index

DON'T TURN

THAT PAGE

Pirate Empire.

page just yet. One of the key elements in

number of merchant fleets arriving at and leaving a star system. Traders coming to the star system are the sellers, traders leaving the system are the howers Fach star also has a Trade Value which comes into

The Trade Index is calculated

by the computer monitoring the

the equation. Hearts are Elixing (worth 200 points), Diamonds are Gem Stars (worth 150 points). Asterisks are Energy Stars (worth 100 points): and circles are Gateway Stars (50). The crucial equation bringing

all these elements together is: Trade Index = Trade Value × Buvers/Sellers. So a system which has seen a mass exodus of traders tends to have the best Trade Index

So if 50 Buyers leave a Gem Star and 30 Sellers arrive the Trade Index = 250 (250 = 150 ×

Spotting the best systems to trade with is one of the surest ways of making a killing at the Seventh Empire. If you can predict which system will have the hinhest Trade Index next turn we'll provide you with a cassette for your microcomputer. If more than five of you get the right answer we may have to draw the

Send entries in to the Trading Competition, Computer & Video Games, Durrant House, Herbal don EC1R 5JB

ANOTHER CHANCE TO ENTER

Please	include	me	in	the	Seventh
Empire	Compet	ition	1.		
Iname	my trihe				

My name is: Address

Telephone

BATTLE REPORTS

Some 53 battles were fought out in the galaxy this month as tribes struggled to claim certain stars for their emperor.

Defenders came out on top again but there were some close run things — notably at Apel where Bloodline and Amethyst fleets stormed in against the Sun empire defenders.

empire defenders.
In the most one-sided conflict,
315 defending Sun Empire fleets
rounded on two lone attackers
from the Dead Empire.

There were no positive battle bonuses though as all the attackers took trading losses into war with them.

Notes of all the bonuses are included below:

Xokeg defenders suffered a loss of —; Rivev defenders won but only at the expense of a —1 loss; Rurus defenders, —1; Jadeg defenders, —1; Yuses defenders, —1; Hakub defenders, —2; Apel defenders, —1; Meden defenders, 12; Uleb defenders,

For the first time in Seventh Empire history, the galaxy's diplomats have negotiated nochanges on the peace-treaty front. The Diplomatic Diagram seen below is the same as last

issue which means that Sun Empire defenders could face another hard time in Apel. Remember, where there's a rule the bow empires are at war for this game turn and no rule means that the two empires are at

peace.

The Raid Penalty is once again 1. The Imperial ships this turn finished up on the following systems: Vepoz, Yanok, Rivev, Soner and Elar. Amethyst and Pirate empire ships were not placed on the map this time.



The Diplomatic Diagram

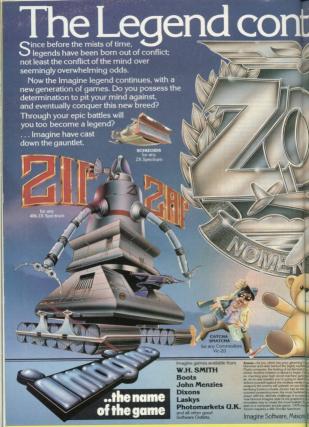
FOZUZ	LARUB	YIBET	XOLIP	ITIL	FUNUS	LULIP	YANOK	XOKEG	ISOX
0						*	254 53	175	
175	219 86	252 248	ABOB	CONER	VEROZ	OATOT	HEZOD	ASOI	SUXEK
VIZAX	QIRUS	HAZAN		*	VEFUZ		*	*	*
175	205 323				205 165	220 293	250 56	353 59	216 103
RAROV	WIDAN	RURUS	MUPIP	NAXIG	BETID	WAVAB	RIVEV	MEGUD	NABOK
*	*	0	*	0		0	*	0	0
247 50	200 80	237 %	286 46	212 85	208 169	214 186	328 47	215 200	213 190
DALIX	OLEX	TASAT	CAZUV	GOVAX	DITUG	OKAP	TOXAZ	CIXAN	GOTEG
*			*		•				
218 218	248 105	231 114	254 53	229 97	242 180	278 64	197 165	popou	TENTE.
	KOVEP	USUG	PEBOB	JADEG	ENAK	KEPAR	UGON	POROV	JINIS
*		*			230 230	721 168	237 181	212 220	
							YODAZ		
FADIS	LOKIK	YUSES	O	*	PAGIL	*	•	*	*
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VASUX	OUXIN	HIPEB	ASOR	SIDAL	VIZET	QAVUV	HAKUB	APEL	SABAG
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ELAR	KERUP	ULEB	PIRAD	JAXEL	- DIB	*	OKOF	*	•
		105 30	725 10		5 294 24		2213 10	250 8	4 205 1
	actic Map	4 447 44			_		-		

Galactic Map

7	
	Orders in Block Caps please
2	Name:
t	Code No: Telephone No:
e	1st Movement phase 2nd Movement phase

			1st Move	ment phase	2nd Move	ment phase
		AT	ACTION	STAR	ACTION	STAR
	FLEET 1			-		
	FLEET 2		-			
	FLEET 3					
	FLEET 4					
	FLEET 5		-			
	FLEET 6					
ı	FLEET 7					
ı						

Please notify us separately of any change of address.







BEATING THE DEADLINES!

The difficult part about writing this Adventure page is that I have to operate to a deadline. That is not a problem until a game begging a review "sticks" at an early stage, leaving much work to be done before my "copy" can be written. So there I am, typing away on my

micro. I'm tired, it is late — oh no — not another one of those difficult Alvenurures! Having just reviewed eight games for a recent supplement, I went to bed and forgot it.

Of course, that was not the end of it —

I knew that sooner or later I would have to come back to it!

So when a bank-holiday weekend came along, I booted up the system, and resigned myself for a long haul.

STRANGER BEWARE...

The rest of the screen is blank. I press a key, the disc starts to whirl in its drive, and I am suddenly on a desert highway near an abandoned gasoline station some way from a small desert town. Thus starts Xenos. the latest offering

on disc from Tandy.

After wandering around the gas

station I decided that for now it would have to be considered a red-herring apart from the crowbar, and moseyed into town.

Although comprising only six buildings, I found it surprisingly difficult to find my way around.

Losing my bearings. I strolled up a

side alley only to lose my way in the desert, nearly dying of thirst, and really dying of poison in some flesh wounds caused by something very strange and nasty out there.

Reboot, and try again. This time I will not be beaten! Why is the gas station and town deserted? Is the jeep really a red-herring?

If so, then the Jack-o-Matic 333 is a very elaborate hoax. What does the old prospector out in the desert know about a "magnetic anomaly"?

Questions begin pouring through my mind, and I am away, oblivious to calls for meals, missing the TV program I had meant to watch. . . .

BY KEITH CAMPBELL



That is the other trouble with writing this page, Occasionally I come across an Adventure so intriguing, that I am unable to stop, driven on by a craving for the solution—to hell with the dead-line! And Xenos is one of those few! When I have finished writing this I intend to blow up that safe if it takes me all night (Wait a minute — could the dynamite be for another purpose?)

dynamine be not another purpose?)

Xenos runs from disc only on TRS-80

Model 1/3 compatible machines. Requiring a rudimentary knowledge of the

American language, if a command isn't
recognised you will be very cleverly
told what word might be missing.

For instance, if you type "UNLOCK DOOR" the line may be altered to read: "UNLOCK DOOR WITH what?", the "what" flashing for a while, eventually clearing to let you add further words. An unknown verb will lead to the insertion of a flashing VERB? at the start of your input.

The plot of Xenos is somewhat reminiscent of Ghost Town, in that everywhere is deserted. But similarity of setting and plot end there.

The score is announced in percentage of mission fulfilled. The first 50% is not too hard to achieve, but the going begins to get rough from there on.

Are there many red-herrings in the game, or will things all fall into place? Is Screaming Foul-Up responsible for the fact that I can put my hands in the

aquarium and apparently leave them there, or am I possibly a strange being?

Xenos is big, but does not appear limitless. Not a long term project like Zork, but one that you will go mad about until finally you have unfolded the riddle of Purgatory City!

'X' ADVENTURE ON TAPE . . . Occasionally I describe a particular

Adventure as different. That is not a suitable description for Xanadu Adventure which requires a BBC Model B computer to run, and takes you into a world of underground caverns, inhabited by dwarfs and monsters.

These are dangerous creatures, and cannot be relied on to turn up in the same place in each game! Some of the situations are similar to those encountered in other games, but with a difference.

With some hard thinking the Adventurer will progress gradually towards his goal, the depositing of all treasures in the treasure store.

his goal, the depositing of all treasures in the treasure store. When this point is reached (says the blurb — for I haven't reached that

point!) "something will happen".

On his travels the Adventurer will find objects not often encountered in Adventure games, the usefulness or otherwise

HOW TO DEFEM

I received recently a letter from reader Alex Shipp, who has been beavering away writing an adventure for his Dra-

gon-32.

Upon completing it he found one major problem: how to stop his little brother pressing the BREAK key, then listing the whole program?

"As you can imagine," he wrote, "some of the messages rather give the game away!" Even worse, what was to stop him getting a listing before he even started to run the game?

He assured me that his brother

would be quite willing to adopt such underhand methods.

This is a problem that besets every Adventure writer. If, of course, Alex's brother is as little as he sounds, then

NEVER FEAR, HELP IS AT HAND!

Last month I reported that Richard Jones and Simon Clarke both had problems with Bedlam. Simon sent a tip to Richard. Richard was able to complete the game, and thus help Simon out with his problem.

Because different people can hend their minds to differing problems, through these pages — if we at C&VG don't know the answers. we can help you to help each other!

For those similarly stuck in Bedlam, printed upside-down you will find how to get past the guard dog! Letters are still arriving with pleas of HELPI for Pyramid of Doom. To find out where to store the treasure, how to pass the rats, and how (most importantly!) to get past the iron statue — again you

Can anyone help Jonathan Evans of Blackburn find the treasure chest in the Tandy Pyramid maze? Please write if you know how to get to it! P. Coppins of Stanford-le-Hope is having trouble with tablets

in Golden Voyage He currently wants to throw them simultaneously into the fountain. He is sure he is on the right track - unless you know different!

of which is not obvious. Has the pentangle some secret sinister purpose? Will the soothing music of the dulcimer send a dwarf to sleep as well as the

player? The game has over 100 locations, and the scrolling replies, often four lines or more of text, are not only amusing, they appear quickly, and have nearly the

verbosity of a disc-based game. OK. it's an impressive game - but unique? What I've not yet mentioned is that this game has a two player option. If that is selected the game takes on a

whole new dimension. The players decide how many moves they will make each turn, and as the game proceeds, a blue message at the top of the screen indicates which player

is in command. If one player arrives in the same location as the other, the reply will

include "There is another Adventurer An object taken by one player cannot

he taken by the other except for purchases made in the shop The two players start off as rivals, and if a fight develops the loser's objects

the easy answer is to give the BREAK

key a good POKE where it will hurt

Unfortunately, that won't prevent the

program from being listed before the

game has been run, and it won't be

long, by the sound of it, before Alex's

is really only symbolic of all those

low-down cunning and devious people

AT EVEN THE

most - i.e. disable it!

little brother catches on However, I suspect that little brother

NG DRAGON

side down to protect the innocent drop to the ground, available for plundering by the winner When playing as rivals it is recommended that only the player whose turn

will find the answers printed up-

it is watches the screen. But wait - there's more! By typing ALLY, an alliance is made, the top mes-

sage on the screen now displays in white and weapon power is aggregated against the monsters in a common struggle to obtain the treasures. Perhaps this is the best way to solve an Adventure in company - no arming about whose suggestion is the next command to be entered!

And there is always someone else to blame if things go wrong!

Unless, of course, when the goal is in sight, one player decides to rat on the agreement, type BREAK ALLIANCE. and rush home with all the goodies! I can only describe Xanadu as uni-

que, at least at the time of writing! No doubt this will not remain the only one of its kind for very long! Xanadu Adventure is a fascinating

game that I can thoroughly recommend at a price of £7.75 from Hopesoft of Newbury.

code to solve the game faster than trying the fair way! If he does, then he will have spoiled only his own enjoyment of the game.

Even after using a reset button which when pressed prevents a program from listing or running, it is still possible to look at the English text. has only

CHR\$(PEEK(video ram)); successively from the command mode (see Adventure page in the first issue of C&VG). Cheating can only be made difficult

by encoding the text, and include a decoding routine in the program, but at the cost of response time and memory. All this reminds me of my desperate

attempts to solve Savage Island Part 1. by peeking RAM. (Yes - even I am not above that sort of thing!) I gained some vocabulary, and saw some extremely surprising things that seemed quite out of character with the game I thought I was playing.

MIND OVER MATTER ...

I got it wrong again Dad! I know, and I

despair! Empire of the Overmind players R. Gillman from Birmingham, and Steven Essery from Orpington have both told me I don't need to drop other objects to use the one of my choice. They tactfully explain that although I might be carrying something. I am not

necessarily HOLDING it. What I should do is to HOLD the object before trying

So I reloaded Overmind, and sure enough, found I was told what I was holding separately from what I was carrying! A fine point - one I have not come across before in an Adventure! I shall have to read the small more

carefully next time! I take back all I said! Another slip like this and I stand to have my licence to Go North revoked!

It all goes to show that even C&VG's expert Adventurer is not infallable there's hope for all of you yet!

Seriously, Keith Campbell is always interested in hearing from you the readers, even if it is a criticism

ADVENTURENET HELPLINE

Clarke of Harpenden). binder. But the pill in the ham-urger meat from the fridge, and it ill dissolve. Feed this to the dog and it will die. (Thanks to Simon it will die. (Thanks to Simon and it will die. (Th To get past the guard dog, if you can get the blue pill from the

lem teust - no og route is an alternative to the xy. Throw the Ruby into the ore treasures here". The oyscs merges with the stone alta give a complete messag oog jo p

whose main purpose in life is to find a way to prove that our excellent programs contain errors, have omitted the logic for an obscure command, or can otherwise be proved faulty. Let him look at the listing, and see whether, even with plain English staring him in the face he can untangle the program

MACHINE!

DEALING WITH LOGICAL VALUES

So far in this series we have been looking at programming in terms of arithmetic and interpreting the 0s and 1s in the computer as having numerical values.

However, there are instructions that allow us to treat the 0s and 1s as having logical or Boolean values, with 0 meaning false and 1 meaning true. The simplest logical operations are:

NOT: Invert a single bit, so 0 (false) becomes 1 (true), and vice versa. AND: Takes two bits and returns 1 (true) if both the bits are 1 (true) and returns 0



INCLUSIVE OR (usually just OR). Takes two bits and returns 1 (true) if at least one of the bits is 1 (true) and returns 0 (false) if both the bits are 0 (false) EXCLUSIVE OR (usually abbreviated EOR or XOR). Takes two bits and returns 1 (rue) if exactly one of the bits in the control of the bits in the control of the bits in the control of the control of the bits in the

1 (true) and returns 0 (false) otherwise.

NOT and AND reflect the use of these
words in ordinary English. We have two
types of OR because OR in ordinary
English is ambiguous — sometimes
meaning INCLUSIVE OR and sometimes
meaning EXCLUSIVE OR.

POSSIBILITY OF CONFUSION . . .

There are symbolic forms for these operations, NOT being indistanted by writing a bar above a symbol, solNOT P would be written as P, and two commonly used sets of symbols for AND, OR, XOR are , V, and, +, +, so we write P , of ro P AND Q, PVQ for P OR Q, PVQ for P

It is best to use the first set of symbols. With the second set there is a possibility of confusion with the arith-

metic symbols for multiplication and addition. The second set is more often used in electronics where this confusion

is less likely.

Logical operations can be combined to build up expressions, for example (P Q) meaning NOT and (P AND Q)

or (P Q) (Q R) meaning (P AND Q) OR (Q AND R). The branch of mathematical logic

The branch of mathematical logic called *Boolean Algebra* deals with methods of evaluating and simplifying expressions like these.

The 6502, 6809 and Z80 microprocessors all have instructions for AND, INCLUSIVE OR and EXCLUSIVE OR, which all work in a similar way.

OK, which all work in a similar way.

The 5802 opcode mnemonics are
AND, ORA, and EOR, and can be used
with immediate, absolute, zero page,
indirect X, indirect Y, zero page X,
absolute X, and absolute Y addressing
modes.

The 6809 opcode mnemonics are ANDA, ANDB, ORA, ORB, EORA, EORB, the A or B indicating the accumulator the instruction operates on.

Like most 6809 instructions, these opcodes can be used with all meaningful addressing modes.

The Z80 opcode mnemonics are AND, OR, and XOR, and these can be used with 8-bit immediate data, a register — A,B,C,D,E,H, or L, or an indirect memory reference — (HL), (IX + displacement), (IY + displacement).

The machine code instructions work on bytes, performing the logical operation simultaneously on the eight pairs of corresponding bits in the accumulator and the operand, and leaving the result in the accumulator.

n the accumulator. For example, if we have:

6502 LDA %00110011 AND %01010101 6809 LDA %00110011 ANDA %01010101 280 LD A,00110011B AND 01010101B

In 6502 and 6809 assembly language a binary number is indicated by writing a % sign in front of it, and in Z80 assembly language by writing a B after the number.

The result will be to leave 00010001 binary in the accumulator. Similarly, using OR instead of AND would leave 01110111 binary in the accumulator, and using EXCLUSIVE OR would leave 01100110 in the accumulator.

These logical instructions are frequently used when we want to work with some of the bits in a byte and ignore others or leave them unchanged.

For example, suppose we are working with ASCII codes for letters of the alphabet and it does not matter whether we have upper case or lower case letters.

The ASCII codes for upper case letters are the binary numbers from 01000001 to 01011010 (65 to 90 decimal) and the codes for lower case letters are the binary numbers from 0110001 to 01011010 (87 to 122 decimal).

The difference between the code for an upper case letter and the code for the corresponding lower case letter is that the upper case letter has 0 in bit 5 while the lower case letter has 1 in bit 5.

We can use the logical instructions to affect bit 5 only and leave the other seven bits unchanged.

If we start with the ASCII code for a letter, AND with 11011111 will always leave an upper case letter, OR with 00100000 will always leave a lower case letter, and XOR with 00100000 will change an upper case letter to a lower case letter and vice-versa.

LOOKING BEHIND THE MASK...

A bit pattern used with a logical instruction in this way is called a mask. We can work out the type of instruction and the mask we need in any particular case with the following relations, where B represents any bit value (0 or 1):



B 1 = B B 0 = 0
B 1 = 1 B 0 = B
B 1 = B B 0 = B

In general, we use AND with a mask to set some hits to 0 while leaving others unchanged. OR with a mask to set some hite to 1 while leaving others unchanged, and XOR with a mask to complement some bits while leaving others unchanged

AN ADDITIONAL INSTRUCTION

The 6502 has one other instruction related to these logical instructions BIT, which can be used with zero page

and absolute addressing modes. BIT only effects the flags, bits 7 and 6 of the memory location specified in the operand going into the sign and overflow flags respectively, and the zero flag being set according to the result of an AND operation between the accumulator and the memory location (this AND does not affect the accumulator, only

the zero flag). Related instructions on the Z80 are CPL, and the BIT, SET. RES groups. CPL complements the contents of the accumulator, changing 0s to 1s and 1s to

Os. RIT. SET and RES are used in the form RIT b register: BIT b. (HL): BIT b. (IX+d); BIT b, (IY+d); and similarly for SET and RES, where b is the bit number,

from 0 to 7 that the instruction works on. BIT puts the complement of the specified bit into the Z flag, setting the Z flag

so it will reflect the value of the bit. SET sets the specified bit to 1, and



In the 6809, related instruction COMA. COMB. COM. ANDCC. ORCC. CHEERI

MACHINE

COMA and COMB complement the A and B accumulators respectively. COM can be used with direct, extended and indirect/indexed addressing modes. and complements the contents of the memory location specified by the oper-

ANDCC. ORCC and CWAI can be used with immediate addressing only. ANDCC ANDs the operand with the Condition Code register, leaving the result in the Condition Code register. ORCC ORs the operand with the CC register leaving the result in CC, CWAI ANDs the operand with the CC register, leaving the result in CC, and stops and waits for an interrupt.

FLAGS WITH CLEAR VALUES

ANDCC and ORCC are used to put specific values into the flags

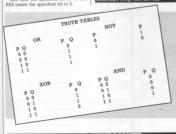
For example, the Carry flag is bit 0 of the Condition Code register.

So to set the carry to 1 we use the instruction ORCC #%00000001 and to clear the carry to 0 we use the instruction ANDCC #%11111110.

The 6809 assembly language contains the mnemonics CLC (Clear Carry), SEC, (Set Carry), CLI (Clear Interrupt Mask), SEI (Set Interrupt Mask), CLV (Clear

Overflow), SEV (Set Overflow). These are included to make 6809 source code compatible with 6800 source code.

The instructions are assembled into the machine code for the corresponding ANDCC or ORCC indstructions.



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SPECTRUM ATARI



By Garry Marshall

The Texas Instruments TI-99/4a has some highly individual features for graphics.

The graphics commands that are provided by TI Basic, which is the version of Basic that is built into the computer. include CHAR, HCHAR, VCHAR and CCHAR

These commands have the following purposes. CHAR permits a graphics character to be defined so that you can establish say, your own kind of Space Invader. With HCHAR and VCHAR characters can be placed on the screen, and GCHAR allows you to examine the

Although commands and facilities comparable to these are available on other machines, very few provide them in such a consistent and easily used form. In particular, the commands for



Fin 1.

placing characters on the screen and for examining the screen work in terms of the screen's row and column positions. Thus, they provide the same capability as POKE and PEEK do on other machines.

Now, suppose that we want to create a graphics character such as the one shown in Figure 1 to use in a game. This character can be defined and assigned the code 128 by the command: CALL CHAR(128, "040EFF1F0C7

Note that the characters are based on an 8×8 dot matrix, and that the string used to define the character is just the row-by-row hexadecimal representation of the character when each dot that is "on" is represented by a 1 and each one that is "off" is represented by a 0.

There is not too much scope for representing a tank (in case you didn't recognise it) in this way, and if you want to create a more realistic effort you can always use four characters to be plotted next to each other as shown in Figure 2. The four characters used here can be defined as characters by

CALL CHAR(129 "000103FF0707033F") CALL CHAR(130, "COEOF8FAFAF8 FOFA" CALL CHAR(131, "ED622D1F")

CALL CHAR(132, "76AB76F8")

Note that any trailing zeros need not be included in the string describing a

character The small tank can be plotted at column 5 of row 7, for example, by: 1201



The larger tank can be plotted with its top left part at column 8 of row 7 by: CALL HCHAR(7.8.129) CALL HCHAR(7.9.130)

CALL HCHAR(8.8.131) CALL HCHAR(8.9.132)

CALL HCHAR(7.5.128)

With the computer's commands it is particularly easy to create movement. For instance, to make the small tank cycle through the positions shown in figure 3 the following program segment will suffice. It works by blanking out the tank (with a space character code 32) just before it is plotted in the next

position 100 DIM NEXT(8) 110 NEXT (5)=6 120 NEXT(6)=7 130 NEXT(7)=8

140 NEXT(8)=5 150 ROW=7 160 COLUMN-5 170 CALL HCHAR(ROW, COLUMN,

180 CALL HCHAR(ROW, COLUMN, 32)

190 COLUMN = NEXTYCOLUMN) 200 GOTO 170 The movement can be slowed down by introducing a delay into the loop,

sav. between lines 170 and 180. If the path to be followed by the tank already contains plotted characters that should be replaced as the tank passes, then lines 170 to 200 can be replaced with the following lines. The variable TEMP holds the code of the character to he replaced after the tank has passed.

170 CALL GCHAR(ROW, COLUMN, TEMP) 180 CALL HCHAR(ROW, COLUMN, 128)

190 CALL HCHAR(ROW, COLUMN. TEMP)

200 COLUMN = NEXT(COLUMN) Paths other than a straight line can be created by allowing the row position to

change as well as the column position. With SCREEN the colour of the screen can be established, while with COLOR the colours of the characters can be established independently.



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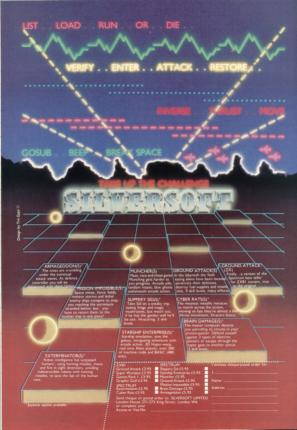
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The fourth World Computer Chess championship is due to be held at the annual meeting of the ACM (Association for Computing Machinery) in New York from October 22nd-25th

It is difficult at this stage to see the reigning world champion, BELLE, failing to retain the championship it won three years ago at the last championship, at Linz in Austria.

WARNING FOR BELLE

A good indicator for the world championship is the annual series of North American computer chess championships also sponsored by the ACM. The "Chess" series of programs by David Slate and Larry Atkin dominated the early wears of this tournament with 7

David Slate and Larry Attin dominated the early years of this tournament with 7 wins in the first 8 years (1970-1977). From 1978 onwards, however, BELLE has been the dominant program, with wins in 1978, 1980, 1981 and 1982, and second place in 1979 (behind Chees

The only program apart from BELLE and the various versions of "Chess" ever to win the North American championship was Ribbit, back in 1974. The "Chess" series no longer appears to take part in tournament play, leaving BELLE in an apparently supreme posi-

Nevertheless, the manner of its victory in the 1982 championship in Dallas sounds a slight warning note for BELLE.

DRAW DANGER

In the four-round tournament, the program won two games and drew two to finish in a four-way tie for first place with 3 out of 4.

BELLE gained first place on tiebreaking, a deserved result since it had played each of the three others concerned, drawing with Cray Blitz and heating Nuchess and Chaos.

The greatest danger to the strongest program in a short tournament is too many drawn games. In a four-round event, it may be impossible to recover from even one draw—such a small number of rounds would not be seriously considered for a human event at any remotely comparable level.

BELLE's victory over Nuchess in

BELLE's opening book of 350,000 positions and ability to evaluate up to 150,000 positions per second are both huge advantages over all its foreseeable rivals. On the other hand, Kaissa the winner in 1974 and Chess 4.6, witned favourites to retain the championship three years later, but failed to do so. Will the title change hands again?

round 3 at Dallas was a remarkable one. It is interesting to note that Nuchess provides a link with the past glories of the "Chess" series, since one of its co-designers is David Slate, co-designer of the original version of "Chess".

over a decade before.

Here is the game between BELLE and

STRANGE PLAY

White BELLE v Black Nuchess
1. P-K4, P-K4; 2. P-QB3, N-KB3; 3. P-Q4,
NxP; 4. PxP, B-B4; 5. Q-N4, NxBP; 6.

QxNP
Extremely strange play and a most
unusual position after 6 moves —
already the game seems to be won for



If now 6., NxR; 7. QxRch, K-K2; 8.
B-NSch wins so black continues 6. ...RKB1; 7. B-KN5, QxB; 8. QxQ, NxR;
Now Black must try to extricate his

9. N-B3, N-B3; 10. B-Q3, P-KR3, 11. QxP, R-KN1; 12. P-KN3, N-B7; 13. Q-R7, NxBch; 14. QxN, R-R1; 15. QN-Q2, R-R4; 16. O-O-O, NxP, 17. R-K1, P-Q3; and Black resigned.



After 18. NxN, PxN or 18.... RxN; 19. RxRch, PxR; White wins another piece by O-N5ch.

GOODBYE TO ALL THIS .

This is my final article in a series which began 21 months ago, in the first issue of *Computer and Video Games*, when I described Von Kempelen's Turk, an automatic chess player built over 200 years ago.

In the series, I have tried to combine articles about tournament play with ones on detailed analysis of end games such as King and Rook against King and Knight or topics such as retrograde analysis or finding forced checkmater.

Computer chess is unusual in attracting two different kinds of followers, the tournament competitor and the academic researcher.

It is notable that even BELLE incorporates very few ideas which were not in use 15 or more years ago. Its success is very largely due to its large speed advantage over its rivals. The Artificial Intelligence researcher would argue that its lack of any deep understanding of the positional themes of the game will prevent it ever advancing much beyond its current level.

Others would claim that a further increase in speed of analysis is all that is required to improve performance and that this will apply indefinitely, as long as hardware speeds increase.

Thus, a World Champion program is attainable as soon as fast enough hardware becomes available without any additional "intelligence". Which side is right? Only time will tell.

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WELL, DO YOU KNOW SHICHO?

You can learn to play Go in minutes because the rules are very simple. But it can take many years to learn how to play the game well. The number and the novelty of the tactics that arise is quite startling.

One of the first discoveries that everyone makes is a zig-zag capturing sequence resembling a staircase, but nevertheless referred to in this part of the world as a ladder. The Japanese use the word shicho. (with the accent on the second syllable). Thus the saving "No know shicho, no play Gof

Figure 1 shows why understanding ladders is so vital. White plays the cut at 1, separating the black stones marked. Unfortunately for white, this is a mistake! Black has two ways of putting the cutting white stone into atari (under immediate threat of capture).

If black plays at white 3, white would naturally play at black 2 obtaining three liberties for his group and thus escaping immediate danger.

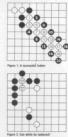
So black plays as shown and white extends but now his group has only two liberties. Black can thus put white into atari again.

By choosing the correct seguence to create the zig-zag course. black drives white clear across the board. At the edge white finally runs out of liberties and thus inevitably loses his now quite large group.

Of course as soon as white discovers that he is in a ladder, he should cut his losses. Having carried on to the bitter end, the only sensible move left for white is resignation.

However, the game situation is rarely this simple. Not all ladders succeed. Figure 2 shows a similar situation but with the presence of a "ladder breaker"

The stone marked was in place before the ladder sequence. Thus after white 17, white's group has three liberties and black has no good move. Indeed the situation is now disastrous for black! He has with crosses) and can expect many chosen. The program must try both BY ALLAN SCARFF





Black should have checked for white stones anywhere along the path of the ladder including where the black stones are played.

entire position to crumble.

A common tactic is to play a stone that not only threatens to rescue one or more stones in a ladder.

but also threatens some other dire consequence at the same time The idea is that the opponent can only answer one of the threats. For example, where the paths of two ladders intersect it is possible to

play one stone breaking two ladders, thus ensuring the rescue of at least some stones. In advanced play, on a full-sized board (19×19 grid), whole seguences of moves will be selected in anticipation of the effects of lad-

It is very difficult to imagine that any computer program could play Go even moderately well without taking ladders into account. Indeed, the simple Go playing program described in previous articles can be severely thrashed by a human exponent of ladder tactics. Happily.

ders.

however, it is relatively easy to ex-The most important amendment numerous cutting points (marked is to ensure that the correct atari is

tend such a program.

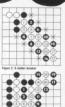


Figure 4: Ladders can bend

ways of putting a group into atari and choose the way which, if the attacked group extends, minimises

its number of liberties. If this gives rise to exactly two liberties the program must look further ahead, resuming the sequence of moves until the group

"escapes" or dies. If the group eventually escapes and if the original stone making the atari has only two liberties itself, the atari must be rejected otherwise the program can go ahead. Where both options produce two liberties the lookahead must branch. If one branch ends in death for the laddered stones the atari is OK.

The method is fairly quick because only when an atari is selected for further consideration does the lookahead occur. Also the lookahead will examine very few moves, since the sequence in a ladder is usually forced.

The method has good results in complicated situations where the human player tends to "boggle"!

For instance, look at figure 3. Can black capture the marked stones? The computer program says yes the sequence is shown in figure 4 where we discover that ladders can



Mr. Chip

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WILL YOU FLOCK TO BUY THIS VIRGIN GAME?

SHEEPWALK

Sheepwalk is one of the much publicised new titles from Virgin Games — a spin-off from the Virgin record and publishing company.

If this is the standard of their games then I would respectfully suggest that Mr Branson stick to records. At £7.95 it has got to be the rip-off of the year and a dead cert for our Great Software Disasters page.

The idea of the game is to round up all the sheep which have strayed from their pen. You play the part of the sheep-dog — although you could be forgiven for not realissing this as the hound is nothing more than a tiny black speck on the scrren. The animal must also have a gammy leg as it moves with the speed of a farmyard ox rather than a scampering dog!

Points are awarded according to the speed at which the sheep have been rounded up and the amount of crops saved from the rampaging flock in the vegetable patch.

The idea for the game is a good one though not entirely original. It falls down on its execution. Written in Basic it's just far too slow. I can't think of worther professional software house who would bring out a game of this type and at this price without first improving its graphics and then speeding it up with machine code.

Seffere R.E.

see themselves as a software house at all, or is this just another example of the gold-rush mentality which is killing the computer games business with poor quality products.

The idea behind this approach to the

business seems to be grab any program you can, and publish as quickly as possible to make a quick killing. Never mind the quality, just look at the full colour cassette inlay. You have probably gathered by now

that I'm not going to rush out and hand over almost £8 for Sheepwalk. Despite this there is something good about the game which I think is worthy of mention.

The author of the game is fully cradited on the cassettle inlay. We are given a picture of Gregory Trezise as well as a short biography. Software, like records and books, has to be thought of, programmed, and put forward for publishing by the author. The programmers therefore deserve our recognition for their efforts.

Getting startedGraphics

Graphics
 Playability
 Value

JOYSTICKS SPOIL THE FUN

TOMBSTONE CITY
Tombstone City is one of those games from the official list of cartridges manufactured by Texas Instruments which

Perhaps this is the point. Do Virgin

are given an amount of shelf space disproportionate to the quality of the game. In fairness to Texas it is an old game

and some of the newer ones are of a much higher standard. It's the buyers in the multiple electrical shops who really deserve the criticism for inducing people to buy these crummy old games. It is time they awe more thought to their software.

buying — particularly for the TI where there isn't a great deal to choose from. The idea of the game is to blast all the Morgs that are dotted around the screen. Each time you hit one it turns into a giant desert cactus.

Using the buildings at the centre of the screen for shelter the best strategy is to dart in and out before the Morgs can get you. But don't block your escape routes from the township by

blasting the morgs as they move across the roads out of town. You could end up trapped!

As with many TI games the useless joysticks are one of the main factors which spoil the fun.

It's a game which requires quick hand-eye co-ordination and therefore

extremely frustrating when your gun will not move as instructed. When you have cleared one screen a new day in Tombstone City begins. If you do venture beyond the walls of

If you do venture beyond the walls of the town to take on the Morgs in the desert you may need to use the panic button-space bar which repositions you at random somewhere else on the screen.

Not the best cartridge available for the TI and for my money Parsec and Chisolm Trail are much better games. Tombstone City is in the shops at

around £25.

Getting started

Graphics
Value

Playability

n



PSION WIN THE WAR OF WORDS

SCRARRI F Psinn's Scrabble program has jumped straight to a standard which chess machines haven't achieved in 20 years

- it can test top human opponents. Charles Davies of Psion is worried about the 11,000 word vocabularly: "We could have had 20,000 but we went for a fast response time." He needn't be, the game seems to have words aplenty for its own moves and is certainly not quilty of over-challenging the human player's efforts

The presentation bears witness to the thought that went into it and the 16 page booklet which goes with the game is backed by on-screen prompts and

reminders On black and white TVs the coloured squares are changed into symbols so triple-word scores can still be spotted even if they remain elusive targets.

In play the computer makes good use of the double and triple squares and is programmed to hold onto an "S" which doesn't give it a significant increase in the ecore

It also plays quickly and responds well within the two minute time limit demanded by Scrabble tournaments. It is hard to criticise this game except

on price. Nicely packaged as it is, the £26.95 price tag means that it is only going to find its way into the dedicated Scrabbler's library. A pity because a lot of non-Scrabblers would enjoy it, if given the chance. For the playability mark we tested it out on two top Scrabblers.

8

Graphics Getting started

Value EXPERT VIEW

With 11 000 recognised words crammed into 48K, Spectrum Scrabble is a marvel of modern programming techniques but how close can it run the serious Lexicographer.

Scrabble is a competitive game for over 700 members of Scrabble leagues and clubs and the national finals are keenly fought by wordsmiths capable of scoring 6-700 points in each game.

We asked two regular entrants into the national finals. Heather Twidle and Jose Cone of Ware Scrabble Club to test out the Spectrum as an opponent and stood by to take notes.

They were very impressed with the clarity of the board and the presentation of the screen, liked being able to see the Spectrum think through its moves and were pleased it totted up your score before asking you to commit a word. It also keeps score of the game and (important for the series Scrabbler) keens a note of how many tablets are

left in play. The program received top marks for its combinations of words and its game standard was generally rated as high. After a few practices, they took the machine on at the top level and after a mighty struggle which included three seven letter words, finally beat it by just four points - 397 to 393.

The computer did not have to challenge often. It guestioned Jos (Scottish sweethearts) but accepted Qua and it earned good marks for its vocabulary.

While it was voted extremely user friendly it was a fierce competitor. And both would like to own the game to practice against. Which gave us the

idea of running a competition to give Scrabblers the chance to win a Spectrum and this program. Read the September issue for your chance to enter our wordy competition for top Scrabblers. Playability

FRENETIC FUN **AMONG THOSE DEADLY DROIDS**

Commodore 64 owners are in for an enormous number of new games to chose from as many of the leading software houses have decided that this is one of the machines that they are going to concentrate on.

In this review one of the first 64 games to be launched in the UK is taken through its paces.

Gridrunner is an adaptation of the nonular arcade game Centipede in which you had to fight it out with the insects in a mushroom field.

In Gridrunner the insects and spiders are replaced with Pods. Droids and Leader Droids. It is the year 2190 and the mutants

are thriving on the energy generated in the Earth's lunar power station. As the last protector of the Grid you

must blast the alien Droids before they can mass in sufficient numbers to launch an attack on Earth You will need all the manoeuvrability

of the combat ship if you are to avoid the Grid Search Squads who are made up of a conga-line of Droids. These are

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like the worm in Centipede and must be enlit up as quickly as possible. Hit the leader Droid to earn 400 points.

One original addition to the basic Atari design are the X/Y Zanners who move up and down the left hand perimeter of the grid and along the bottom of the grid. Every so often they pause to shoot a plasma-beam up screen towards you. The Zappers are your main opponents in this game and the knack is to constantly move away from them when ever they are close.

Every time you clear a grid you receive a bonus combat ship. Your cannon is canable of rapid-fire which you will need as those Droids keen on coming with 31 attack waves.

This may not be the most original game for the 64 but it is one of those frenetic shoot 'em ups that keep you coming back for more. Gridrunner is available from Llamasoft of Hampshire 22 00

- Getting started • Granhics
- Value Playability
- **BOUNTY BOB** BEATS THE

ACTIVE APE! WINER 2049'er

lounty Bob is the hero of top selling Miner 2049'er. The ten-screened climbing game which has rocketed to the top of the American best sellers charts is now available on 16k cartridge in the UK

While Atari drag their feet on bringing out the official Nintendo Donkey Kong the Miner will capitalise as the best available climbing game for the Californian micro. Chances are it will prove a better game than D'Kong anv-

Its' ten screens and multifarious challenges will take some beating. Game play is very Kong-esque. Our hero can be made to run right and left, climb up and down ladders and jump by depressing the fire button to hop over the nasties

There is also a touch of Pacman as some of the nasties change shape after Bob collects a certain artifact enabling him to eat his adversaries to score bonus points. Just as in Pacman you must be quick as the nasties can change back at any second. Once Bob has collected all the spanners, pickaxes and gold nuggets, found his way to the top of the screen Bob has staked his claim and can move on to the next

Now a word on the screens - there are ten of them so I won't describe them all in detail. Some of the highlights are slides, lifts, transporters and even a cannon on the final screen which fires Bob up to the top of the screen when he



has collected sufficient gun powder. The key to negotiating most of these screens is to carefully time your leaps. Many peaks and ledges have to be successfully leaped on to, some of which are patrolled by the mutants so you must be careful to land on these when they are in digestible form. Also he careful not to fall off the edge as Bob can only fall a certain distance without killing himself For seasoned gamers the first few

screens will provide little or no challenge. To prevent the tedium of climbing through these levels, the game does allow you to start preliminary on any of the ten levels. To do this simply run Bob up to the

top of the first ramp - out of the way of the mutants - and type in 2137826861 and then shift 1 to 10 - depending on which screen you wish to start. Big Five Software do not print the

above information on any of the documentation which comes with the game so you would be well advised to hang on to this review or make a note of the code number. If, on the other hand, you want to be sure of working your way up through the screens on your own merits burn this C&VG now. A splendid game - very addictive

and every bit as good as anything to come out of the Atari stable. Available from Calisto Computers at

- £29.95 for the Atari 400/800.
- Getting started
- Playability

Value

Graphics

KILLER KONG **COMES UP** RUMPS ON BBC

KILLER GORILLA

converting to the BBC microcomputer -probably because the software writers wanted to be quite sure of the quality of their game before trying to tap the enormous potential sales of this popular game.

After a lengthy thumb blistering session I can report that this Micropower version is well up to the standards expected by your good self - the discerning C&VG reader

VI-E-W-S CO



Four screens of Gorilla frenzy are waiting to be enjoyed in this game —

just as in the Nintendo arcade version. The plot — for those of you who have been in hibernation for the last two years, owes a lot to the Hollywood classic — King Kong, Gorilla grabs girl and takes her to top of scaffolding, Gallant Italian carpenter comes to rescue, Gorilla attempts to thwart the rescue bid by showering our hero with

barrels.

Screen one is easily mastered and the skilled gamester will get to the top of the screen each time every time as a

mere formality.

Number two is a little tougher introducing fire balls and deadly custard
pies sailing along a moving conveyor
belt which is trying to take your little
mans legs away from him before he can
get up the ladders.

For most of you though the real test is to be found on the third screen.
The ladders are few and far between

The ladders are tew and far between at this level so you will need to make precise runs and leaps in order to work your way up the platforms to the top of the screen. Also watch out for the falling dumb-bell which can land on your head just before you make the final heroic leap to the fourth screen.

I did spot a bug on screen three very occasionally Mario will fall down dead for no apparent reason when he is on his way up the ladder in the centre platform.

Other gripes were with the graphics which had a tendency to flicker and much of the on screen movement seemed shaky.

Having said this it must also be said that Killer Gorilla is the best version of Donkey Kong yet for a home computer. The game is available from Program Power of Leeds at £6.95.

I played the game using the keyboard but it must be immeasurably improved with the addition of a joystick.

One other improvement could have been included in the program itself—a level selecter. After a great deal of practice it became tedious having to jump through the first and second screens just to get to the third screen—which was as far as I managed to

Getting started 7 Graphics 8 Playability 8 Value 10

COMMODORE ALIENS BACK TO BASICS . . .

ORF

Gorf managed a moderate success in the arcades and with its helicopter style joystick will be familiar to most of you. Four levels of shoot 'em up action

Four levels of shoot 'em up action await your intrepid laser base in this new cartridge game from Commodore for the Vic-20.

The first wave is nothing more than a fleet of archaic Invaders — which you shoot at through an arc of protective force field. This protects both you and the aliens — you have to find a gap to blast through!

Once these have been dismissed you fight it out with a much tougher breed of laser spitting alliens who flap — bird-like — all over the screen. Tough — but not too tough.

Far harder — is the third wave which has the aliens spinning out of deep space 3D style. If you can get beyond than me!

If you can battle your way through to the fourth wave you get to take on the Gorf's on their home territory. This is the toughest test of all with fireballs to be dodged. Finally the flagship appears. You must penetrate the craft's neutronium hull if you are to destroy the power reactor.

As an added incentive to work your way up through the ranks you are given a rank based on your performance at the end of each mission. Starting with Space Cadet the supreme challenge is to become a Space Avenger.

Gorf is one of four new cartridges from Commodore — in the shops now at £25 for the unexpanded Vic. Although it is a reasonable conversion of the arcade game you would get inurb better value for your money by investing in five different cassette based games which you could get for the same price.

Getting started
Graphics
Value
Playability

NEXT ISSUE

Vic owners are in for a treat next month as our resident Donkey Kong expert tests all the versions on the market for this popular micro.

New arcade conversions from Atari in the shape of Dig Dug and Donkey Kong and a review of an exciting new game from the English Software House with a real diamond as a prize.

Also reviews for Commodore 64, ZX81, Texas Instruments and the BBC. Don't miss our no holds barred reviews section next month— written by experts for experts.

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VIOLENT SPACE

Next month the Quest is on to find the living room champions who are taking computer games to the limits. We are starting a Hall of Fame high score chart on a range of selected games which we will add to

1.F. X.T. M.O.N

each month.

First up will be Violent Universe from Quest of Cheltenham. The game puts you in a spacecraft in charge of a canister of deadly stellar

gas-clouds.

As alien craft float through space the player sends out gas clouds which destroy any alien unlucky

enough to enter into them.

The game can be played on a keyboard or a joystick. You have 40 seconds to conquer each level and must score more than 1,000 points to move on to the next level.

Ouest have developed a system

for checking high scores against a code and instantly validating them. This system has already worked well on Ouest's previous game, Black Hole and the current top scorer is Russell Capel with 2530.

Scores on Violent Universe should be sent into Ouest on the address.

be sent into Quest on the address shown on the cassette inlay and we will start publishing our Hall of Fame next month. If there are other cassettes you think we should include in a Hall of Fame please let us know by dropping us a line.

Violent Universe costs £5.50.

DIZZY SPELLS

Two sorcerers locked in spell-binding battle in an enchanted forest provide the action in a thrilling game Stones of Wrath, next month. As your opponent sends a deadly

Swarm spell down upon you, you throw a hasty Shield Spell and reply by conjuring up a Demon to despatch off through the forest to try and defeat the other wizard. It's a game of atmosphere and cunning strategy as you try to outwit

one-another and it features on the front cover of our September issue. There's Star Trek in 32k; Vic Quest; Turtle Hop, a fascinating new computer game called Turtle Hop which bears no resemblance to Frogger; Caterpiller and Assault, plus a whole lot more in a trilling plus a whole lot more in a trilling

summer edition.

We also have a run down on just how Psion managed to teach their Spectrum 11,000 words and the fascinating history of Scrabble-playing computers. This is backed up by a chance for keen Scrabblers to win a chance for keen Scrabblers to win a

48k Spectrum plus Psion's Scrabble cassette, in a wordy competition.

It's all in the September issue of C&VG. But looking further into the future, we have a real treat for C&VG fans coming up before Christmas.

The Computer & Video Games 1984 Yearbook has 132 pages, including Bugo cartoons, specially commissioned games listings, professional hints to help beginners present their games and much much more. We'll let you into further secrets of our 1984 Yearbook next month.

There's just no room left for Arcade Arena next month — but it will be back in October with four arcade-style games for your favourite micros!

JUMPING JACK

I Imagine's Jumping Jack is the latest addition to the company's range of Spectrum games and should soon be leaping up our best-sellers chart. And the Liverpool software house has given us 100 Jumping Jack cassettes to give away this month.

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